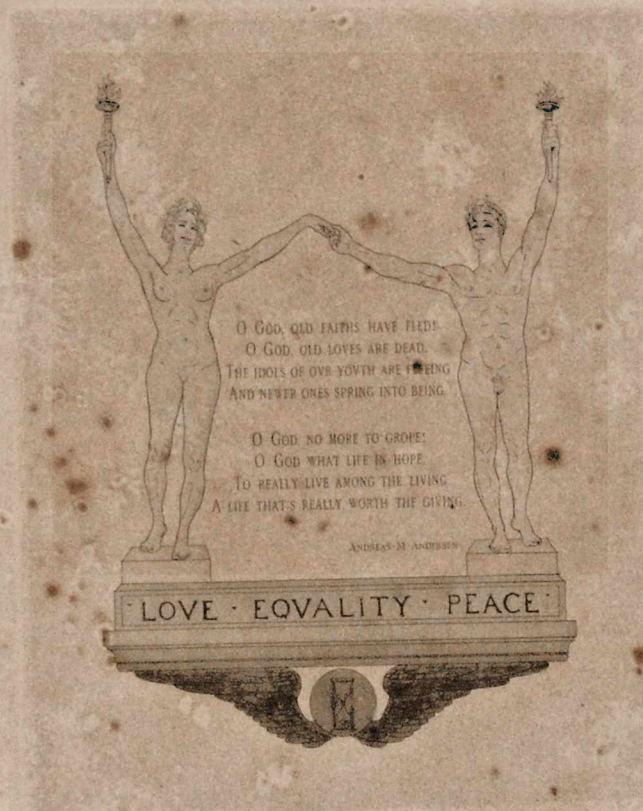


CREATION
OF A
WORLD CENTRE
OF COMMUNICATION

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OF COMMUNICATION

BY
HENDRIK CHRISTIAN ANDERSEN

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ARCHITECT



PARIS
ANNO M D CCCC XIII



TO

ANDREAS M. ANDERSEN



ALL MEN AND WOMEN ARE GIVEN BIRTH AND LIFE BY THE
POWER AND WILL OF GOD, AND IN ALL MEN AND WOMEN
THERE IS THE INBORN DESIRE TO UNDERSTAND AND THE
ENDEAVOUR TO WORK FOR THEIR CREATOR

TO GIVE TO THE WORLD AND THE FUTURE SOME TOKEN OF
LOVING APPRECIATION, A LIGHT TO GUIDE THEM: — THIS WAS
THE HIGH CALLING WHICH MY BROTHER STROVE TO FULFIL.
HIS LOVE AND FAITH INFUSED THEMSELVES INTO ALL THAT
SURROUNDED HIM AND INSPIRED TRUST AND ASSURANCE IN
ALL WHO KNEW HIM

WE HAD PLANNED TO CARRY OUT TOGETHER WORKS OF
ART FOR THE PRESENT AND THE FUTURE; BUT IN THE
ENTHUSIASM AND JOY OF WORK, AT THE MOMENT WHEN
HE WAS IN THE FULL BLOOM OF YOUTH AND READY FOR
EXPRESSION, HE DIED

TO HIM I OWE MORE THAN I CAN EVER EXPRESS IN WORD
OR DEED, AND TO HIM IN LOVE, FAITH AND DEVOTION

I DEDICATE THIS WORK



With the keenest sympathy and appreciation, I wish to convey my deep gratitude to the many collaborators who have assisted me in accomplishing this volume.

The untiring energy and valuable counsel as well as the inspiring suggestions of Olivia Cushing Andersen, have been of vital assistance to me.

To M. Ernest Hébrard, aided by his brother, M. Jean Hébrard, I am indebted for the architectural execution of the plans and elevations here presented. Their artistic taste and excellent judgment of practical planning upon colossal lines, have facilitated my giving a definite form to, this World-Centre. I also extend my warm appreciation to their assisting architects and draughtsmen as well as to the painters and engineers who have contributed valuable counsel and shown exquisite taste in their work upon these plans.

I am indebted to M. Gabriel Leroux for his contribution of the historical text, and to Olivia Cushing Andersen for the translation of the same; to M. Paul Hyacinthe Loyson, assisted by M. Charles Marie Garnier and M. Henry Davray for the translation of my text; to M. Jules Chauvet for his careful and exquisite execution of the engravings, to M. Ch. Wittmann, with the assistance of M. Jules Nibart, for the impressions of same, to the Maison Renouard, under the able direction of M. Paul Bourge, for the printing of the book.

For their excellent assistance, my esteem and gratitude are extended to all my collaborators.

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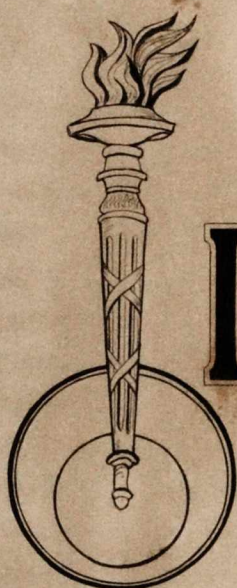


ΑΠΟΛΛΩΝ



ΗΡΑΚΛΗΣ

INTRODUCTION



In every period of time, history shows us that men created and built architectural forms upon definite lines to protect life and to facilitate progress. From the humblest prehistoric hut or group of huts, to massive granite walls with forests of columns, or to a modern city, all kinds and forms of construction, fragile or imposing, meagre or magnificent, confusedly grouped or with order, symmetry and beauty, have met definite mental, social or political needs of men, have reflected a phase of moral or spiritual development.

Therefore, the first part of this volume is devoted to tracing briefly the chief architectural conceptions that have definitely marked the growing phases of human development in several parts of the world, and to noting the purposes these conceptions served, illustrating various styles and the labour spent upon developing and beautifying them.

The second part of this book presents architectural plans and suggestions for conveniently and harmoniously meeting an incipient need, which, sooner or later will give evidence of becoming a vital necessity to all parts of the inhabited world : that is, the need of an *international world centre of communication*.

The very fact that nations depend more and more upon harmonious and peaceful economic relations facilitated by science and culture, assures us that, at no remote period of time, the difficulties of cooperation must be

resolved by the establishment of an international centre of communication. With this consideration in view, these plans and suggestions for the "Creation of a World Centre of Communication" are presented after years of concentrated study and application. We are convinced that practical development depends upon comparison : so, strengthened by an ever growing faith that man will attain greater heights through unity of purpose and fellowship, this centre is conceived upon imposing monumental lines, destined to house and centralise human accomplishments, spiritual and intellectual, scientific and economic. We are certain that if this Centre could be established on a broad basis, it would afford undeniable and unlimited advantages to nations and to peoples in all parts of the world. It would not only house and unite the already well established international institutions, but would facilitate their expansion. It would encourage the desire, ever increasing in the world, for unification, and it would give a strong impetus to the progress of religion, science and justice. In addition, a stronger international foundation stone for peace and fellowship would be laid.

In reviewing the past a world movement towards greater and greater centralisation is clearly evident. It is based upon widening conceptions of cooperation and tends to accomplish ends greater than can be performed in isolation. It aims at the destruction of the enforced cooperation, which is called slavery, and substitution of a spontaneous union of forces for the mutual advantage of all concerned. We are able to follow intelligently, almost step by step the progress that humanity has made in the world from prehistoric times upwards, from the more or less isolated family to larger and larger groups, united for the protection of themselves, their ideals and the products of their labour.

The liberty or oppression that marked an age is evidenced by the kind of architecture evolved. We see primitive man building his "shelter", his "enclosure" and his "signal", a raised trunk of a tree or a stone which from afar indicated the sacred meeting place of his clan.

As time went on, we find certain tribes gaining the upper hand and dominating their neighbours. These had their ambitions and their religion; they had their sense of right and wrong; but they often sacrificed lives and homes in blindly aiding their chiefs to uphold rights which, in the light of modern science and understanding, were "wrongs". Their domination and sense of security were reflected in the size and the stability of their constructions which ever aimed at a more permanent character.

We still have vivid images, carved in stone and handed down to us from the despotic Assyrian age, full of monumental beauty of line and symmetry of conception, comprehensible to all the world in their graphic, impressive descriptions, almost superhuman in their conceptions and often magnificent in execution and invention, a sculptured language in solid material

inspired by personal pride, and naively symbolic, denoting much that was beautiful, yet more that was cruel and horrible in the motives and energy of man. These images resist the ravages of time and bring the funereal processions of barbarism vividly to our minds. Kings are represented in single combat with ferocious lions. They are often the central figure in war scenes, boldly dashing into opposing armies or hunting fierce beasts, while slaves carry arms. They are even immortalised in the act of gouging the eyes of prisoners, as if desirous of being glorified by this barbarity. Such scenes as these are handed down to us on the sculptured walls of palaces, — symbols of personal glorification, pride, vanity and courage, as well as of mental and physical degradation.

In Egyptian history, we read of the sacrifice of millions of slaves in the construction of gigantic temples, magnificent tombs, pyramids, obelisks, artificial lakes, mysterious underground corridors, with halls for the sacred crocodiles. In these structures full of power and beauty, marvellous in their majesty, overpowering in their energetic idealism, we discern the strenuous efforts of men to create a worldly kingdom of monumental grandeur, — thus forming a human centralisation which in spite of its magnificence, yet lacks a true comprehension of the creative will and power and is too small for humanity and too narrow for human progress. Along the sleepy banks of the Nile, half buried in the long, silent desert, ruins of gigantic proportions rise before one, painted by the setting sun with red gold and violent orange and veiled by deep blue and violet shadows in the silent hours of night. They prove to the traveller and to the historian that, in spite of their overpowering magnificence, much was inspired by human vanity, — yes, more than we can here recall. Yet, the fact that men have the power to build magnificent temples and to overthrow mountains, fills the soul with a strange pride and a secure faith that what is accomplished in a righteous cause, nothing can destroy.

We pass on to the beautiful centralisation in Greece. It is there that human life, it would seem for the first time, struggled to attain an ideal perfection. The Greeks felt that life in itself was a symbol of divinity, and its full and harmonious development, physical and mental, the highest and most divine obligation and duty. In art, literature, philosophy, drama and physical culture, they endeavoured to express all the richness and variety that life can give. Temples of perfect proportions, architectural conceptions of dream-like beauty rose in order to give ample scope to development and culture. Rich and poor contributed freely their talent, money and labour to the expression of an ideally developed life. And in this centralisation, the contribution of one was the gain of all, for worship was expressed in action and in the creation of beauty. The Greeks laid the foundation stones for uniting human endeavour with the intention of creating logical ideals, and did so upon lines so appealing to the aesthetic sense

as well as to the practical, that the influence of their highest conceptions is still felt by the creative genius in man.

They inspired the world-embracing dreams of the great Alexander, whose unlimited ambition, aimed at nothing short of a world-wide empire. His strenuous effort to form a world centre by subordinating all nations and all endeavours to his will and control, are not only positive evidence of man's creative genius, but also prove the desire to centralise humanity even at a time when the world was only partly discovered, and the utility of such a centre not essential.

The great river of life, ever growing in strength and grandeur, soon saw his highest achievements crumble into oblivion through the force of the ever growing need of expansion and progress. All human ambitions, soar they ever so high, yet sink at last into the still waters of forgetfulness.

Again we trace the attempts at world centralisation made by the Caesars, and we follow their righteous endeavours, as well as their vain ambitions, to build a world capital, which should control human effort in all parts of the world, that they could reach and conquer. As Rome rose on the strong wings of world-embracing motives and ambitions, we find her laying down noble laws upon broad, human lines, conceived to give strength to her purpose and control to her rights. Immortal creations in art appeared, as she assumed the right and the responsibility of establishing a world centre. By her efforts at concentration humanity has profited and has adopted many of her strongest ideals and aspirations. The decline and fall of this great centre is the strongest proof that where spiritual motives are not considered essential, and are absent in human action, no kingdom however powerful will stand : for only through divine inspiration can men be guided, and only through spiritual motives will the world unite to build a centre, that will give lasting protection to their highest ideals.

The imperial " eternal " city rose rapidly in all its glory and grandeur, but the imagination and soul desire of men grew faster. With all her colossal magnificence, with her mighty arms stretching East and West, to the North and to the South, with her powerful laws and strong armies, with her conquering aims and imperial desires, with every material means of gratifying human appetite, the God in man was suffocated and physical and mental voluptuousness grew apace, sowing the seeds of corruption and degradation. Then from her high pinnacle, imperial Rome with all her glory and power fell and failed as a world capital.

The day that followed gave birth to the new soft light of religion, inspired by messages of righteousness and divinity conveyed by Christ, whose grand, human symphonic poem, by virtue of its celestial message, penetrated to the uttermost parts of the inhabited world. Nothing could overthrow the spiritual teachings of this divine messenger, though men could destroy his frail body by torture. The power of a centralisation built upon a deeper

and more penetrating reality came through his teachings. The blending of the visible with the invisible appealed to the higher intelligence in man, as the righteousness of his doctrine embraced the whole of humanity, inspiring it with love, faith and fellowship.

So appealing was the message, that all manner of men felt a responding sympathy from the depth of their souls. Kings and rulers, the rich and the poor, the labourer and the slave, the sick and the blind, all turned towards this divine Messenger and Poet, whose teachings rang out with a human appeal so full of deep philosophy and spiritual comfort, so righteous in its simplicity, so comprehensible to all mankind that each ideal which he created was at once graven on the heart and mind of man. A song of praise and of thanksgiving to God was whispered in secret caves under the ground in imperial Rome. Despite indescribable tortures the divine spark could not be extinguished. Human cries, though suffocated by imperial command, moved men to compassion and shame. Slowly arising from darksome caverns comes the voice of prayer, penetrating the soul of man ever more fully and deeply; higher and higher it ascends, and grander and more glorious becomes the response, until there rise with celestial grandeur, domes and spires high into the heavens, and the whole world is embraced and overshadowed by the golden wings of divine justice.

Thus we find another world centralisation of human aspiration, created to embrace the whole civilised world, established upon the solid foundation of divinity. We find the very structures of imperial Rome torn down and the stones and columns of her magnificent edifices used to enclose and protect sacred symbols and to serve as temples of worship and prayer.

Rome, the imperial centre of the world, verged to her end, and crumbled into dust, but only to rise with renewed strength and magnificence as the ecclesiastical centre, from which Christianity with its divine mission and immortal symbols, soon spread over the world. It touched a deeper chord in the heart and conscience of man and brought him to a full sense of the divine meaning and value of his soul.

Thus history enables us to retrace the progress of humanity and witness the rise and fall of human aspirations and kingdoms and we stand marveling at their evolutionary magnificence : and from their majestic power we see them fall only to be carried yet higher by renewed strength and invisible forces. We are assured that however much the blackness of the storm may for a time blot out the horizon, calm will return. We are aware that man has ever been striving to attain centralisation. We know that humanity, like the ocean waves, falls only to rise again in constant rhythmic change. We see that human centralisation is prompted by a growing sense of justice, combined with higher spiritual needs; these latter are inspired by ever broader motives, illuminated by ever clearer and more penetrating lights.

Christ gave the light that leads humanity through righteousness and purity

towards eternal life. He gave it to all the world, as well to rulers and kings as to the meek and the humble; a light so clear and inspiring, so pure and comprehensible that even the blind can see the kingdom of heaven through the eyes of the soul. He taught men that the kingdom of heaven is within, and that, through love and devotion, through labour and justice, this invisible kingdom would grow strong and imperishable.

After the fall of the Roman Empire we can trace in detail the development of the spiritual capital with its world-embracing interests and endeavours. We watch the influence of this new centralisation advancing over the surface of the earth. And, as this mighty power extends, we nevertheless note with pain that the centre whence it is distributed enriches itself, and often demands rights that spring from no real religious motives. We find again obligations imposed and brought to bear upon states and men and a new development of human activity.

Ambitious men with the sanction and protection of this ecclesiastical centre, fortify themselves upon hill-tops, forming small kingdoms of their own, subordinating the surrounding people through force of arms, and increasing their riches by war and bloodshed.

We find the world divided into states. Boundary lines are fixed at the cost of bloodshed and suffering, and geographical definitions separate countries, these having their special laws and rights.

Christianity, with its divine mission and obligations, now often lends its most powerful arms to the rulers of men, who use this means to gain the most unrighteous ends. Again pages of human history are polluted with corruption and blood. In this age religion takes the form of a mighty figure seated above the clouds, holding with terrible significance a material hell in one hand, a material heaven in the other, the former being the punishment of those who refused to give their life and strength to vain ambitions and claims, and to subordinate themselves to their rulers; whilst the latter was offered as the reward for self-effacement in ministering to princely egoism and ambition.

Bloody wars, caused and sanctioned by personal ambition in the guise of religion give negation to the teachings of Christ, and cover with infamy the record of those days. Yet, the definition, clearly outlined by Christ, of *God in man*, can never pass away.

In calling to mind the history and evolution of men and states, we can trace and clearly realise the means that facilitated the achievements of their highest aims, their development and progress, as well as the cause of their downfall.

We do not discuss the virtue or vice of any epoch or ruler. But as we are assured of the divinity of the human soul, we can survey the past with calm and serene judgment, and endeavour to strengthen the future by a deeper comprehension of the God in man and so help through unity, strength and

culture, to build the ladder, as in Jacob's dream, that reaches from earth to heaven.

As we follow the development of physical and material accomplishments from prehistoric times up to the present, as we note high material achievements, and study social, scientific and religious motives; — as we trace hopes, desires and ambitions, as we realise the great results already attained — although much has been and ever will be, prompted by vain, personal glorification — we begin to discern, in spite of all apparent contradictions, the deeper meaning of God's mission to humanity.

We have seen kingdoms fall from the highest pinnacles of material glory and ambition into utter degradation; we have stood upon the brink of their ruins, and have contemplated in silence their monumental achievements and their tragic end. We have measured the ambitions of great men, and have followed step by step their motives in conquering the world; we have even been able to see their highest aims and desires almost realised. Yet, we have often felt the soul of the many crushed by the ambition of the few, and sacrificed in the mad pursuit of glory, thus destroying the dream of world unity; for, as Christ said, "What doth it profit a man, if he gain the whole world, and lose his own soul".

A change is now felt throughout the entire world. A divine responsibility governs our actions. As we are one with the past, so must we be one with the future. Those who are yet to be born demand our attention. They must be guided by our righteous motives. Through us they must gain strength; through us they must be led to greater heights. Notwithstanding the divisions and subdivisions of the earth, the varied ambitions of nations and the pride of possession, all humanity, consciously or unconsciously, is being drawn closer and closer together upon lines of broad, human sympathies, into one concentrated whole. Men in all parts of the earth are becoming ready for this change and look eagerly for its material manifestation. They realise that their strength can only come through world unification, peace and fellowship, — a grander coalescence, — a world centralisation.

This change that is so keenly felt and desired in many parts of the globe towards unity of purpose in all vital human activities, must be accomplished by a more ample, comprehensive and logical means of uniting human efforts, by cooperation upon the broadest and most economical lines, by harmonious blending of all mental and physical efforts, and by the encouragement of all branches of art, science and culture; in a word, by allowing ample scope to the development of all that is beneficial and useful to mankind.

Such a unity all science tends to facilitate. The fearless and the pure in spirit recognise and welcome it. The self-contented hold back and are afraid. Yet it is safe to say that this evolutionary change is being brought about simply and naturally, in spite of all opposition, and that it will become

established by general consent, through higher conceptions of the divine spirit of God unfolding world-embracing missions to man.

The division of the different parts of the earth has now been made. The sea and the land have been measured. These are all material accomplishments, but the inspiration and genius of man has no limit and no end, and these will develop in spite of all boundary lines, in spite of peace and war, religions and laws; and it is to facilitate the growth of the inspiration and genius of man that it is proposed to create, for the mutual benefit of all nations, a World Centre, where their spiritual and intellectual inspirations as well as their scientific and physical achievements will be focused.

A world centre of science and culture built upon broad, human lines, would meet with a universal response. Though each state may be intent on fulfilling local obligations and on working out its own economic and practical expansion, yet, closer relationships brought about in a normal way, would facilitate a reciprocal understanding of the most essential social, intellectual, scientific and spiritual needs of men, and such a brotherhood of endeavour would go far towards producing a unity of purpose and a spiritual desire to give and to receive only what is most essential to progress, and most elevating to the soul.

It is being realised more and more that nations can never again be entirely separated. Impassable walls to enclose and protect them are things of the past. All barriers built by personal pride and unrighteous gain are destined to crumble away, for the great human sea will sooner or later undermine their very foundations. No walls built by human hands can prevent God's people from coming together. Therefore if humanity is to move forward, it must move as a united whole; for only by the concentrated efforts of mental and physical strength, joined in one determined purpose, can humanity carry out its right mission.

The world has progressed by religion and it has progressed by war. Religion has lent an invisible ideal to the minds of men; war has lent them the arms of material protection, but religion as well as war is stained with bloodshed. Yet, in spite of all, the world has progressed. Nevertheless, however great the value of war in the past, however useful it was in blending nationalities, in drawing great groups of people together, in uniting their achievements, in setting up great aims and ideals, for the protection of which even life was never grudged, however potent it has been in stimulating patriotism, yet, although vast sums are annually spent on elaborate scientific preparations, war is certainly becoming less and less of a necessity. That the future will find a new and more righteous means of protection than the destruction of human life, cannot be doubted. Science helps to preserve life, and religion points out ever more clearly the God in man which cannot be trampled on by death. As men awaken to these truths, so they will repel with horror the inhuman desire of inventing death-dealing machines.

The ever increasing interweaving of industry and commerce forms such powerful economic ties that all right thinking people will join in protecting them, and soon no nation will be strong or reckless enough to sever them. This bond will be in itself a preventive of war, for the whole question turns on how far war benefits mankind (not individual nations) or the reverse. The expediency of it affects the people who sacrifice their lives more than the governments or rulers who proclaim it. Though the protection of national rights, entailing the sacrifice of blood and treasure may be regarded as sufficient exoneration for declaring war, yet some different solution is now becoming imperative.

How long men can or will allow their governments to involve them in war against their will is one of the deepest questions of the age; but it is certain that war and the rumours of war will continue to disturb the peace of the world until some solution as efficient as the destruction of life is introduced to protect, benefit and expand the interests both of individuals and of states.

Yet it seems reasonable to believe that in the near future war and bloodshed must be dispensed with. As human endeavour coalesces, new methods, supported and acknowledged by all nations for the promotion and protection of their profoundest interests and their well-being, will come into existence.

Possibly the only causes for wars in the future will be disputes concerning the division of as yet unclaimed lands, and for a time, the protection of the interests of the same, or the establishment of boundary lines; but these matters will more and more become a question of international importance and readily be settled by courts of justice. It seems incredible that any wars in the future should be due to selfish and dishonourable motives. Though questions relating to industrial and commercial rights may arise between any two countries, yet the time has gone by when a righteous solution could only be obtained by an appeal to arms.

The truth is that in the future, war and religion assisted by science will take different forms. The divinity which works through creative genius, before which men bow with instinctive reverence, is coming to be better recognised, to be more eagerly sought for. This divine spark is born wherever man is to be found. It knows no country or limits. It animates all righteous ambitions and meets all human needs. It may arise at first as the glory of a single nation, but by its virtue and human appeal, it rapidly becomes international and world-embracing. No worldly power can prevent its divine mission. No nation can claim exclusive right to it. As it ministers to a common human want, so its protection is the concern of the whole world.

It is therefore becoming apparent as man's higher nature asserts itself, that international disputes in the future will not involve the sacrifice of human life. It cannot always be just to spill human blood : for all men

will seek to give life and not to take it away, especially if opportunities are offered them, and if they feel that by their labour the world will be benefited, and their usefulness fully recognised. The divine purpose in all human activity, however diverse in its manifestations, is coming to be more and more clearly discerned; and by the unification of high ideals, bloodshed will cease to be the direct means of securing justice and equity.

The whole earth is eagerly searching for truth and justice, and the boundary lines of states cannot hold the energies of peoples. This is realised more definitely as the human race grows with increasing rapidity and tends to become a world-embracing unity. The peace which is desired by all, and which is essential to progress, can only come through a world-wide organisation, founded on a basis at once spiritual, scientific and economic, capable of meeting the ever increasing demand for enlightenment, expansion and unfettered progress.

Humanity awaits with eager eye and attentive ear the rhythmic pulsation of united life, feeling assured that progress now means concentration and that concentration requires centralisation — a centralisation of all human efforts for the amelioration of mankind.

Through love and fellowship greater heights of divine understanding must be reached. Nothing should act as an obstacle to the onward march of humanity. Though doubtless the interests of nations are best served by preserving national individuality, yet no barriers of general prejudice should be built up to separate nation from nation. The divine right of existence is given to all : and men's highest obligation is to nurture and to encourage all desires for expansion.

It is true that many national characteristics are caused by the varying climatic conditions of the globe, which, by their very nature, cause some countries to be more productive than others. It is not too much to say that these conditions determine the differences in physical and mental attainments between nation and nation, and thus go towards moulding their social institutions. The inhabitants of certain zones are keener and more quickly comprehensive, while in other parts of the world the minds of men move perhaps more slowly, yet are often more profound. Nevertheless, the differences between North and South, East and West are only relative; for all humanity is pressing forward towards one divine solution for its existence. And this solution can only come by means of the special gifts and aptitudes which enable men, — rulers and people, alike — to understand the physical, mental and moral endeavours and attainments of their fellow workers in all parts of the world. Only by a complete understanding of the whole, aided by the ever increasing means of communication and cooperation, can the world go forward to its great goal — the “ one far-off divine event to which the whole creation moves ”.

Harmony of purpose is the surest and quickest way of advancing in

any endeavour, national or international. Much has been done by the increasing facilities of transport and communication, by telegraphy with its wireless girdles around the globe, by the Press with its enormous diffusion of information; but, in spite of all this, the question is continually arising as to how the various countries of the world can be still more practically brought into contact, in order to learn from each other how to take concerted action for the benefit and well-being of all.

Indeed, one of the most pressing questions of the age is how to practically meet ever increasing obligations? How best to further right and friendly relations between men and nations?

Such an International Centre as is here planned and presented for the purpose of assimilating and distributing intellectual and scientific knowledge from all people to all people, would go far towards creating peaceful economic relations, as well as towards facilitating practical cooperation between all men and all nations.

In spite of political differences and ambitions, religion, science and commerce make more or less the same appeal to all peoples throughout the world. The confluence of thousands of people towards one common centre in order to study practical ways by which man can be benefited, can only have a divine and spiritual force as its motive power. In fact, no great work in art or science is done without a high form of spiritual strength. Religion, art and science are all types of spiritual devotion. These become stronger and more closely related to the needs of man as the world progresses; they enable him to feel a divinity in all things.

The mere fact of realising that the " Kingdom of Heaven is within ", gives to our highest motives and acts a spiritual significance, however material they may seem at first sight. For whatever is accomplished by man springs from the invisible realm of thought. The union of the most cultured and scientific minds of all nations must create a more spiritual and harmonious feeling in man as well as animate and elevate his conceptions of God : and never before has there been a moment so opportune for gathering together the whole human family around one common hearth.

The products of all peoples are essential to the progress of the world. Yet, at present, should one State suffer from the antagonism between capital and labour in another, even though a solution might be arrived at, yet no redress is possible till such a centre is created as can unite the representatives from all nations and bring them together to discuss these questions scientifically and economically for the welfare of labour and of capital, of industry and humanity.

An International World Capital could and would take up this question as one of its most essential and important human problems. It would unite all leaders of national labour unions as well as representatives of capital and industry. Its object would be the protection of labour and industry,

the representation of the working man and the pleading of his cause before the whole world, the avoidance of those misunderstandings between the labourer and capitalist which cause social dislocation, affect the peace of nations and interfere with industry, commerce and transportation.

Until the present age, nations have often advanced and attained distinction entirely through their own efforts. Great accomplishments in art and science stand as an eternal record of national achievement. Many nations have left rich legacies to the world in their contributions to the sum of human knowledge. But the ever increasing population of this globe requires greater economic facilities as well as larger scope for its activity, and the present need of interdependence must constantly increase.

Internationalism has of late made immense strides, and it seems needless here to describe in detail all that has been done to show how essential a factor it is in the world's progress. Writers of undisputed knowledge have amply set forth the value of practical international relations. They have not only furnished proofs of the spread of internationalism, but have contributed many valuable suggestions, treating its aims with such unfeigned praise that few can fail to be touched to the heart's core.

The noble arguments often met with, fill us with the assurance that in the near future suggestions and advantages will accrue leading man evermore to greater heights. What has been accomplished thus far, has come about so naturally, so logically, and so rapidly that many even now do not realise that this universal concentration of purpose : — internationalism — exists. Yet from small beginnings it has silently grown into a mighty structure, resting on imperishable foundations.

As we pointed out in the beginning, we can trace the progress of men at all times and in every land by their architecture. This has remained at least in part, though its creators have long since passed into the final silence. In architecture we see the ambition of kings, of potentates and of peoples objectified and crystallised, and in every line a spiritual or material symbolism appears. It is in architectural conceptions that the record of human progress is silently embodied; and the pages of that record are clear to read.

These plans then for an International World Centre of Communication, have been made that nations separated by ocean and mountains, by language and customs, by politics and prejudice, by religion and culture, might here imbibe living and vibrating knowledge at a great fountain, and offer of their best. Thus by their correlation a mutual understanding, essential to progress, will result, and a new impetus will be given to the various industries and arts, to production and commerce, now so largely separated by the rivalry of the markets and the diversity of economic interests. Such a centre, by recording the highest human attainments and freely offering them to the whole

world, can but stimulate the tendency to harmony between nation and nation, and thus bring nearer the possibilities of lasting peace.

As we trace the progress of man from prehistoric ages up to the present day; as we note his material and spiritual achievements and learn what were the happiest conditions of their growth, it becomes evident that unity and peace were the essential factors of his noblest inspirations. And as time goes on, humanity is ever more hopeful that peace will at length gather the whole world beneath her wings, so that all nations may mount ever higher to the goal of divinity. The souls of all men in the sight of God are as one. Surely the blending of humanity into one complete unity of purpose and desire can but have been foreseen from the beginning, and it is our duty and privilege in life to help to bring all human efforts into one grand harmony.

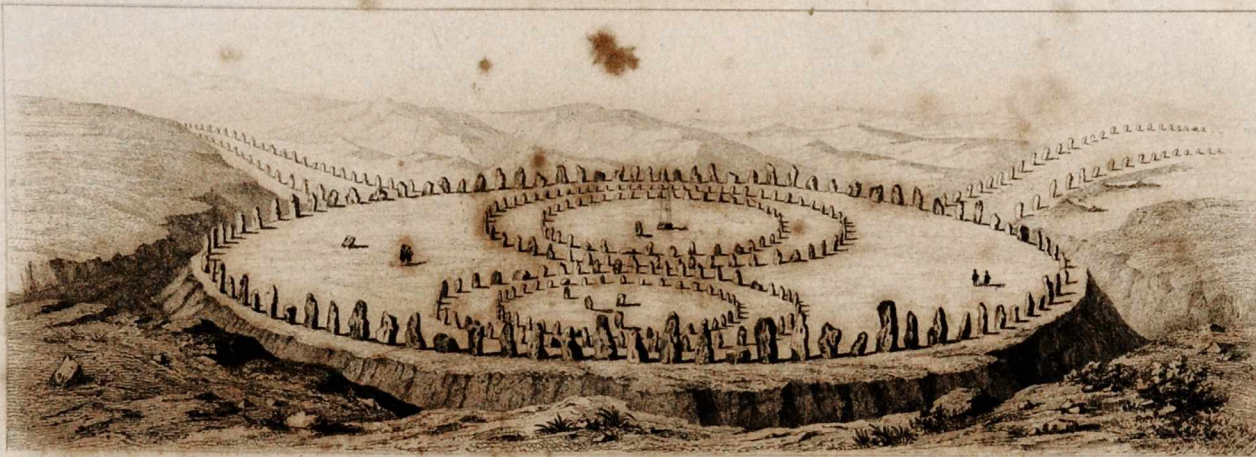
Clearly outlined, the eyes of the soul discern the splendid form of Humanity rising in majestic dignity from earth towards heaven. With the whole world as pedestal it ever rises with suppliant, outstretched arms, offering itself with humble devotion to its Creator — the embodiment of the universal soul mounting in appealing harmony towards the divine source of life.

Founded in Purity and Love, and strengthened by Justice, the nations of the world must ultimately blend harmoniously into one great family. Humanity's mission is to realise that Kingdom of Heaven on earth, visioned from within by the spirit of man. Ever nearer Divinity mounts the human race and ever increasingly is the fact brought home to man, that, in the eyes of the Divine Creator the hitherto irreconcilable tribes of the earth were originally conceived and created as ONE.



PART I.

THE GREAT
MONUMENTAL CONCEPTIONS
OF THE PAST



PREHISTORIC MONUMENT AT ABURY, ENGLAND

From Gailhabaud.

CHAPTER FIRST

ANTIQUITY

I

PREHISTORIC TIMES

THE SHELTER, THE ENCLOSURE, THE SIGNAL

From its origin architecture serves the same purposes; but as social groups increase, architectural constructions increase in magnitude. — The first progress in architecture corresponds with the first progress in social organisation. — The dolmen and the menhir already demand cooperation, a centralisation of labour.



GOUDEA

FORMLESS as the prehistoric constructions may be, they nevertheless announce and in a measure explain the characteristics of the most finished works; they answer the same needs and express the same ideal. A sure affiliation, a chain of which we perceive almost all the links, attach the marvels of ancient and modern architecture to the first attempts at construction tried by human hands.

As soon as man began to build, he found himself grappling with a threefold problem. He was first compelled to make a *shelter*, that is to say to enclose and cover a space in which he could find refuge against the cold, excessive heat, and the inclemency of the weather. It is to this need that the first hut answered. Soon the builder was further asked to make an *enclosure*,

either setting boundaries to a piece of ground or uniting several shelters under one protection. Finally he was given a third task, that of erecting towards heaven a *signal*, otherwise a monument, raised to call from afar the attention of men to a sacred spot. These three applications of the art of building are observed in the prehistoric epoch among the European races, and in our own day among the primitive peoples of Africa and Oceania. As early as its first stammerings, architecture knew these three themes. We shall not cease finding them in the several epochs of its development. As the cooperation of hands and minds becomes organised it will treat them with always greater audacity and amplitude, but its effort will ever be employed in the same direction. It will never weary of searching for new solutions to these problems : to construct a hall, the most vast and highest possible; to group together an indefinite number of buildings in the most harmonious whole; to raise higher and higher the pyramid, the dome, or the tower.

The most ancient type of shelter is the circular hut in the shape of a cupola. With this all peoples seem to have made their beginning in the art of construction. Many savages are still unable to build in other fashion. Everywhere that the prehistoric strata in which remains of human habitation lie concealed have been explored, the traces of round or rounded huts have been recognised. This circular hut represents in the art of building the primitive fact, the original act, which escapes analysis and presupposes no previous experience, no other attempt. It is simply an instinct which determines the form of such a shelter and this instinct is not peculiar to the human species. The beaver constructs in the same manner as the man of the paleolithic age, and builds no less skilfully. All building animals give to their dwellings a rounded form.

Human intelligence did not create this form of shelter but quickly intervened to perfect it. This first manifests itself in the search for solid and durable materials. The use of stone instead of mud or branches marks a considerable progress in this direction, and already indicates a dawning culture. Many savages of to-day can build huts only of earth and wood.

The day when man first dared to break into the rock, and cut it up into material for construction, was a great date in the history of human industry. The uneasiness, and then the admiration, that Stanley awakened in certain African tribes when he revealed to them this manner of building are well known. He was called *Boulamatari*, the *Stone-breaker*, and it is under this name that the blacks venerate him to this day. Another and not lesser progress consists in the use of isolated supports, tree-trunks or stones, erected to uphold the roofing. Thanks to this important innovation the hut can be enlarged and spread over a wider surface, and becomes a hall.

The passage from the round to the rectangular plan marks the end of the primitive epoch. An age follows in which the incurved walls of the hut become straightened and broken at a rectangle. This innovation, in certain countries of the antique world, appears even before the use of metals. In possession of the rectangular plan, of the column, and of stone materials, the architect is on a road from which he will never turn aside. The rectangular house will become the model for the temple, the basilica, the palace.



DOLMEN

Let us add that the round hut nowhere disappears without leaving a trace. When habitations are no longer given this form, it is kept for edifices of a religious or traditional character. While the aspect of the house is freely modified, tombs and certain temples of an unchanging type keep the plan of the primitive hut. An uninterrupted series of monuments in ancient art binds the most majestic of circular edifices, like the Pantheon of Agrippa, to the round hut of prehistoric times. The first human shelter like the nest of a beaver, has become enlarged, raised till it becomes a gigantic cupola. From it derive, through a whole series of more and more audacious attempts, the domes of St Sophia's and of St Peter's.

From a prehistoric necropolis of the Cyclades, at Melos, was withdrawn a cinerary urn in terracotta that reproduces, in miniature, the aspect of seven rounded huts, united side by side in a narrow enclosure. These

huts are symmetrically disposed in a rectangle, three upon each lateral face and one at the back, bound together by a high wall, in the rear part of which is a wide door. The isolated hut, a result of instinct, presupposes no clear image in the mind of the builder. The habitation of which the urn of Melos is a miniature is already the work of a draughtsman who can measure areas and draw geometrical figures on the ground.

The simple single hut already contains the germ of the edifice. The house at Melos with its seven symmetrical huts opens the way to the great monumental compositions.

The shelter and the enclosure answer a primitive material need : they are works of utility. The construction we call the *Signal*, or *Sign*, denotes a new preoccupation in the human mind and answers only a need of the spirit. It is to be counted among the first manifestations of the religious sentiment. When a spot is recognised as sacred, either because it contains the ashes of a venerated chief or because some phenomenon has designated it as such, or because it has been chosen for some cult, attention is drawn to it by an elevated signal, visible from afar. This sign consists sometimes of a stone raised on end, sometimes of a simple mast, sometimes of a tumulus of earth or stones, and is in itself considered as sacred, and as symbolising the supernatural power towards which it is meant to direct the thought of mortals. To show this power yet greater veneration, or to give of it a majestic or terrible impression, the endeavour is made to raise the mast or the tumulus very high towards heaven. The simplest solution consists in planting a more or less squarely cut tree-trunk in the ground. But to render this innovation more durable and more majestic, stone is soon substituted for wood. Vertical blocks of great size are raised. Many peoples have thus planted rough and colossal stones near sacred spots. Such are the famous *menhirs* of Brittany, which are oftenest found isolated, but sometimes ranged in large numbers and in regular files. Still unable to cut rock and prepare materials, men desired that their work should astonish by the immensity of its mass.

In Egypt, the monolithic sign survived after the primitive epoch and the invention of metals. The tapering menhir, cut with resistant tools by skilful hands, becomes the slender obelisk, all ornamented with sculpture, placed beside the entrance of temples.

But it is quickly understood that a single stone on end cannot compete in height with a construction made of piled up materials. To reach ever higher, the menhir is replaced by the tower or the pyramid. To lead the tower nearer heaven, tribes and races unite their efforts. "Come", say the descendants of Noah, "let us build us a city and a tower whose top may reach unto heaven". Every generation, every epoch

of great culture seeks to outdo the preceding in raising yet higher the top of the signal-monument. From age to age the construction pursues its ascent : domes, cathedral spires, minarets of mosques spring upwards with ever greater audacity. The barbarian who of old erected a menhir, to-day has as follower, the engineer who flings his metal framework three hundred metres upwards. Their two conceptions, so different yet so alike, attest both the progress and the unity of art throughout the centuries. Each expresses in its own way, the untiring aspiration of the race towards an unattainable ideal.

Such are the principle forms which it was possible for the primitive builder to give his works. But the point to which we would particularly draw attention, is the following : even at this early epoch, architectural constructions required a strong organisation of labour. Monumental art ceased its stammerings only upon the day when groups of men were constituted for the purpose of carrying out a work in common. No individual, with his sole resources, can create anything great or durable. The isolated man can only build a formless hut. If all the members of one family unite their efforts, this hut can be made



MENHIR

larger and more solid. Let several families of one tribe agree to join their forces and they will already be able, with more durable materials, to build one of those more complex dwellings such as is seen upon the urn of Melos. Cooperation is still far more necessary for the building of the signal-monument. According to the majesty and durability with which it is to be endowed, so must a host of workers be assembled. Thousands of arms must have ached in transporting and raising towards heaven the enormous blocks of the menhirs. All the members of a tribe united in this work because there was a community of thought among them.

II

THE MESOPOTAMIAN PALACE

This is the work in common of a great social group, which cannot yet be called a nation, founded on the tyrannical authority of a chief. — The palace is built for the despot by thousands of slaves and captives.

It would appear that architecture progressed in Mesopotamia much more swiftly than in any other country of antiquity. As early as 4000 B. C. the Chaldeans erected gigantic monuments upon a complex and skilfully ordered plan. It is a long reach from the primitive huts of which we spoke above to the art of these constructors. The first works of which we find traces in the Valleys of the Euphrates and the Tigris already presuppose many centuries of experience. They represent almost the climax of a learned art ripened by long effort.

That which is peculiarly striking about them is the amplitude of the conceptions, the regular and geometrical character of the lines and the audacity with which groups of prodigious dimensions are drawn at a stroke. The Chaldeans were thought in antiquity to have excelled every other people in the study of astronomy and geometry. Their manner of building proves their aptitude and their taste for these sciences. It denotes an abstract and constructive mind, searching for simple, symmetrical forms which it loves to impose upon the aspects of nature. Their large monumental achievements are of a rather monotonous, geometrical severity, but in audacity and magnitude they perhaps surpass those of any other ancient people.

To stand first in greatness among the builders of the antique world, the Assyrians and Chaldeans needed but to find choice materials upon their soil. Yet, strange fact, these excellent architects inhabited the country in the world least propitious to great monumental creations. Wood there is rare; stone almost unknown. For the execution of their gigantic conceptions they had only bricks, baked, or even but dried in the sun. These they used marvellously, covering the masses of dried clay with squares hardened in the oven, forming vaultings over their halls to supplement the lack of heavy timbers, reserving hard stone as a precious material for sculptured decoration. But all their art, all their inventions in engineering could not prevent an almost total ruin of their works. Mounds of earth and brick reduced to powder mark to-day the sites of their cities. So true is it that the grandest architecture cannot endure without stone, and that no artifice can make up for poor materials.

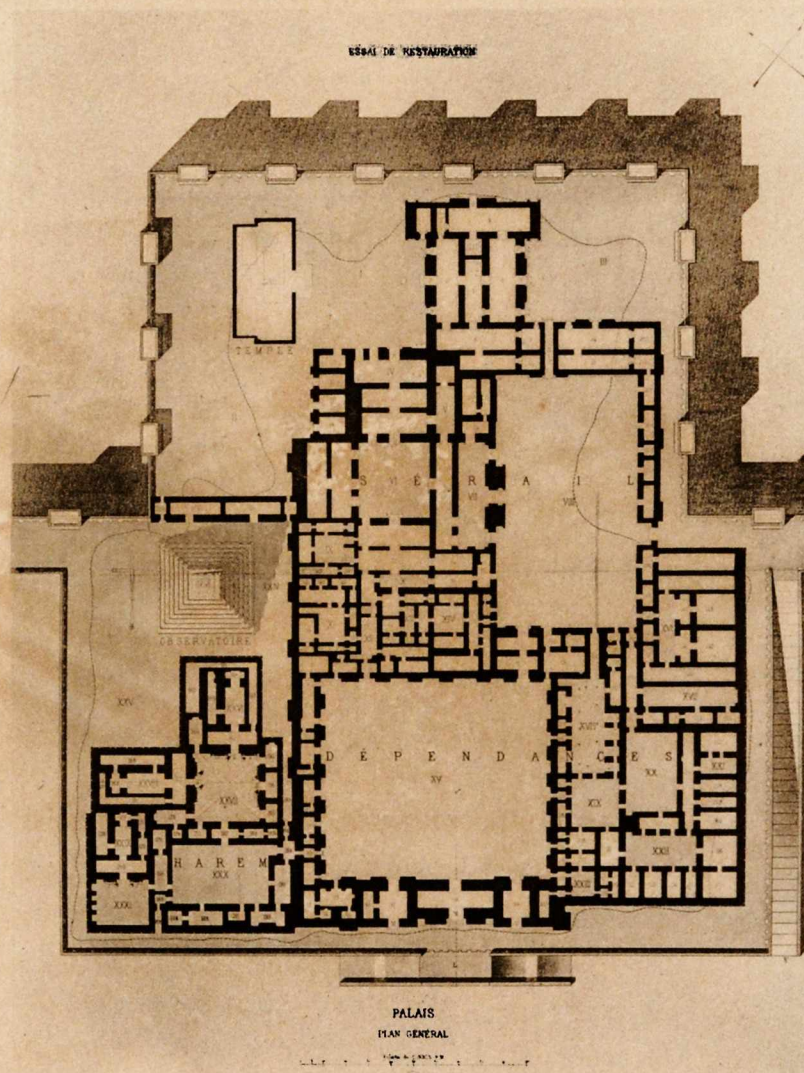
GOUDEA, THE FIRST OF THE ARCHITECT-KINGS

One of the oldest statues we possess is that of a Chaldean king who gloried in being a great architect. Inscriptions name him Goudea, and inform us that he reigned over the city of Sirpourla in Chaldea about the year 3 000 before our era. His image in black stone, now in the Louvre, shows him to us sitting, holding upon his knees a tablet upon which is engraven the plan of a palace. This precious statue has not only the interest of being an excellent specimen of the oldest Chaldean sculpture : the plan of a structure which it preserves for us, is the earliest in date that has reached down to our time.

THE PALACE
AT KHORSABAD

This is the best preserved and was doubtless one of the vastest edifices in Mesopotamia. King Sargon had it built for himself in the city of Khorsabad which he had chosen as his capital.

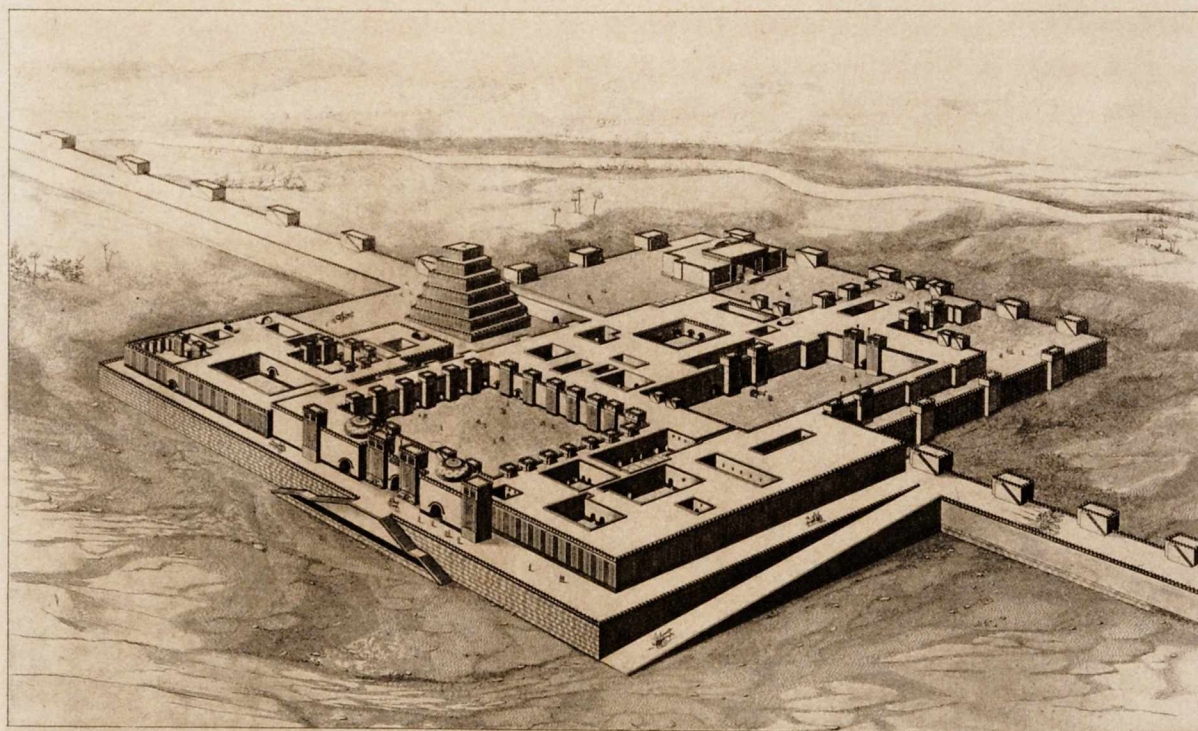
The ruins occupy an immense filled-in area, almost square in shape, close against the enclosing wall of the city. All great Chaldean or Assyrian constructions are thus elevated as upon a vast pedestal of earth and heaped up brick, which in itself represents the work of a whole people during years. On one side the palace is turned towards the city, to which it shows its façade; on the other, armed with towers, it dominates the city wall and overlooks the open country. Oriental tyrants liked to place their palaces at the very gates of the city, thus reserving for themselves an exit through which to escape or call in assistance, in case of internal revolt.



PLAN OF THE PALACE AT KHORSABAD
Restoration by Felix Thomas

They used the same defences against their own subjects that these used against outside enemies. By its situation and exterior aspect the royal palace was a veritable fortress. At Khorsabad, its walls in places measure 24 metres in thickness. Herodotus is charged with exaggeration when he recounts that chariots drove as upon a highway upon the walls of Babylon. That which is revealed by the excavations at Khorsabad surpasses the historian's descriptions.

The high terrace supporting the palace was reached from the interior



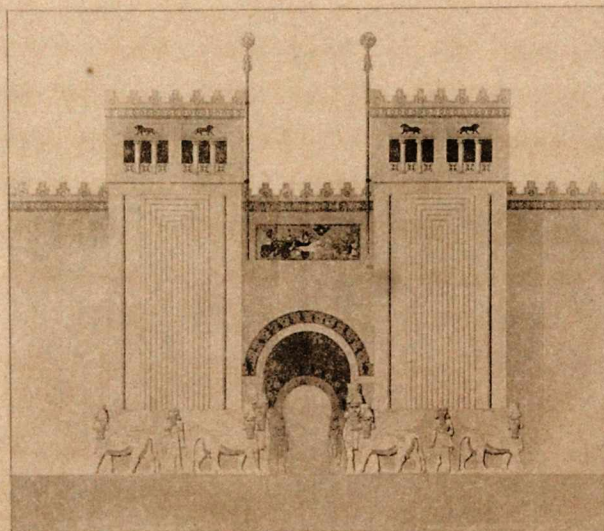
THE PALACE AT KHORSABAD

Restoration by Félix Thomas

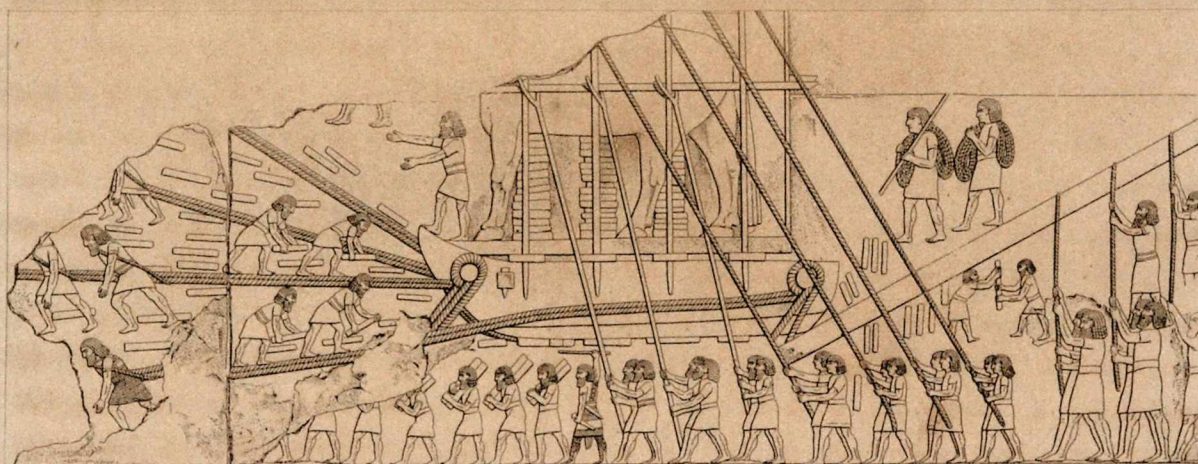
of the city by monumental steps, 100 metres wide, with two balustrades. The interior of the palace was penetrated through a great middle entrance flanked by towers. Seen from the outside, the whole palace formed one high and immense mass of masonry, without colonnade, without windows, without anything that might lighten the bare and severe heaviness of its walls. This monumental type bears the marks of the most absolute despotism; the royal habitation is as vast as a city, but a proud and suspicious city, in which the opulence and indolence of its chief hide themselves jealously.

The entire group of buildings, forming a compact mass without idea of continuity, contains not less than two hundred rooms disposed about twenty seven courtyards. The whole structure was divided into three distinct groups : the *seraglio*, including the private apartments of the sovereign and reception halls; the *harem*, the women's habitation; and the *khan*, which

included rooms for the palace officers, commons, stores, lodgings for slaves, and stables. All these halls and chambers were narrow and lengthened out like galleries. Perhaps this arrangement arose from the difficulty the Assyrians experienced in covering wide spaces. Having never known how to utilise the column or pillar as interior support, and being unable with



ENTRANCE TO THE PALACE AT KHORSABAD



BAS-RELIEF

unresisting bricks to construct colossal vaultings, they had necessarily to reduce the span of their ceilings. This narrowness of interior divisions is one of the faults of their architecture. As a whole the Assyrian palace gives an impression of grandeur, but there are no majestic halls, in keeping with the dignity of the structure.

The sculptured ornamentation of this edifice deserves to be specially mentioned, for it accentuates the haughty and despotic character of this architecture which puts its whole resources at the service of the chief, truly a crowned executioner. Upon the immense sides of walls, long friezes

unfold an interminable epic poem to the glory of the founder. "He always is the hero of these recitals", says Place, "He is everywhere upon the scene and everything has relation to his person... The longest façades of the palace, those of the courtyards and of the galleries, are all reserved for manifestations of sovereign pomp. Long files of prisoners or tributaries direct their march towards the monarch, who receives them standing or sitting upon his throne, surrounded by his officers and servitors. Further along, in the smaller halls, the drama begins. Marches, battles, the scaling of mountains, construction of dams, the fording of rivers, follow one another rapidly and hurriedly, told in a few expressive strokes. Warriors battle from afar with bows and slings or encounter one another, striking their bucklers together. The dead and the wounded, crushed under war chariots, cover the ground or are precipitated into the stream. Here and there flights of vultures hover over the battle-field. Upon a chariot, harnessed with magnificent horses, the king takes part in the combat. A god soars above him and gives him his protection. Elsewhere the machinery of war strikes the walls of besieged fortresses, and yet elsewhere are atrocious scenes that follow the surrender of cities. The vanquished raise their hands to heaven to implore the vanquishers. Tied by a rope round the neck, captives with bent backs and women carrying or dragging children are seen filing past. This human herd, driven by merciless shepherds, is taking the road of exile to work upon the monuments which to-morrow the conqueror-king will raise in memory of his conquest.

"Here is even the king himself presiding at the construction of his palace. He commands, and his soldiers with raised sticks survey a multitude of slaves who mould the clay, fashioning bricks and carrying them upon their shoulders. The artificial mound rises, and already gigantic monoliths are painfully dragged by long lines of labourers; then again come new wars, new triumphs. After the carnage of battle, we assist at pitiless scenes of vengeance : prisoners skinned alive, sawn in two, empaled, put upon crosses or decapitated before the monarch, while an impassive scribe coolly writes upon papyrus the number of heads piling up. As a last stroke to depict these conquering barbarians, the king, with his own hands puts out the eyes of a captive who is brought to him, a ring passed through his lips."

As we see, the long sculptured poem not only celebrates the monarch's conquests, but tells also how the palace is built. The immense edifice at Khorsabad is something besides the luxurious residence of an opulent prince. Veritable monument of triumph, this is the trophy in which Sargon glorifies himself by his victories. The sculptor reminds us that to complete successfully this colossal labour it was not enough to employ Assyrian serfs. Numberless captives, brought by the conquering king from his campaigns, here worked under the lash to build these colossal walls with

their hands. Nowhere, at any period of ancient history, do we see great monumental conceptions carried out by a more despotic power or at the price of greater cruelty.

THE VERTICAL EFFORT — THE ZIGURAT

Upon the same platform as the palace at Khorsabad, the *zigurat* was raised. Assyrian texts give this name to the storied pyramid which, in Mesopotamia, is the uniform type of this sacred edifice. The *zigurat* has usually seven stories narrowing from the base upward. It is, if you will, a pyramid, but of more slender proportions than those which serve as tombs to the Egyptian Pharaohs. It could almost be called a tower. Sometimes it rises beside a palace, sometimes isolated upon a platform of its own.

Its seven stories cover no chamber, not even a narrow cave, as in the pyramids of Gizeh. They are merely terraces upheld by walls of baked bricks, steps of an artificial earthen mountain. At the summit, the last platform upholds a narrow chapel, which is the temple proper. None of these constructions has survived intact to our day. The strongest brick walls have given way under the pressure of the terraces. The fallen pyramid is to-day but a formless heap, still imposing by its immensity.

Such is the construction that, in Mesopotamian architecture, represents the vertical effort. In it we recognise the Sign-monument of the primitive peoples. The Chaldeans and Assyrians, like all other peoples, wished to mark their sacred places by a work pointed towards heaven, and this they made as high as possible. That which is peculiar to them is having placed their *Holy of holies*, the sacred ark, the habitation of the gods, upon the very summit of their structure. With them the sign is not, as the Egyptian obelisk or the belfry in Christian art, a monument placed beside a sanctuary. While drawing attention from afar to the sacred spot, it serves as a pedestal. Perhaps an explanation must be looked for in the close relation among Mesopotamian peoples, between the service of the god and astronomy. Every priest was also an astronomer. The storied temple served as an observatory; its height permitted the minister of the god to be both beside his holy ark and near the stars.

THE GEOMETRICAL CITY. — ITS GARDENS AND ENCLOSURE

The palace and its annex, the *zigurat*, do not give us the full measure of the Mesopotamian architects' genius. Not content with realising these gigantic conceptions of the habitation and the temple, they were the first who aspired to impose a rigorous geometrical plan upon whole cities. If the tales of ancient historians are not invented, we must admit that the

great works carried out in Babylon surpass in magnitude all that our engineers dare undertake to-day. The city, Herodotus recounts, offered a geometrical appearance and was composed of little square islands separated by wide streets, all resembling one another and cut at right angles. The fortified enclosure itself was in the shape of a perfect square, with 26 massive iron doors on each lateral face. The wall was 20 metres high, 30 thick, and garnished with two series of towers, one upon the inside, the other upon the outside. A wide ditch, completely lined with bricks and filled with water, completed this system of defence. A gigantic bridge thrown across the Euphrates, bound the two halves of the city together. Immense reservoirs permitted the turning back of the waters of the stream during floods.

But what most impressed all visitors to this monster-city, were the celebrated gardens which the Greeks counted among the seven wonders of the world. According to the historian Diodorus, these gardens formed a vast artificial amphitheatre, a hill in the shape of a circus, built in tiers upon columns of uneven height and planted all over with trees.

Even taking account of the exaggerations likely to slip into travellers' tales, it is nevertheless certain that the Chaldean architects shrank before no tasks, however great, and delighted in superhuman enterprises. They not only aimed at erecting splendid and precious edifices, but at composing new landscapes and modifying nature. They turned rivers from their courses, dug lakes in dry places, caused mountains, pointed like the zigurats, or verdant like the gardens of Babylon, to spring up on arid plains. It is possible to reproach their art with having confused the beautiful with the immense; yet one must acknowledge a majestic severity in these structures of giants, which modern art, with all the resources of science, has perhaps never reattained.

But the fearful ransom of misery paid for such works must also be remembered. Only by a social state neighbouring upon the worst barbarism and by the crushing domination of an inhuman chief were they made possible. The bas-reliefs of Khorsabad have escaped the ruin of the royal palaces to give us a vision of the sinister work-yards in which serfs and prisoners of war in long files laboured like beasts of burden, under the lash of the soldiers.

III

THE EGYPTIAN TEMPLE

This corresponds to the same social state as the Assyrian palace; it is the work in common of a people under one sovereign will which directs and concentrates its labour.

In passing from Mesopotamian monuments to those of the Valley of the Nile, the great architectural novelty lies in the constant and almost exclusive use of stone. This technical innovation has the greatest consequences and it can hardly be sufficiently said how much monumental art gains thereby in dignity.

Whereas for knowledge of Chaldean monuments we are for the most part reduced to searching the often doubtful narratives of ancient historians, those of the Egypt of the Pharaohs still exist before our eyes in their early majesty. The pyramid of Cheops only lacks a few metres of its former height. The great hypostyle hall at Karnak still raises its monster columns thirty metres above the ground. Those of Denderah and Edfou are literally intact. The tourist who to-day visits the Valley of the Nile, even should he never have studied ancient history, can nevertheless gather as strong an impression of Egyptian art as did a traveller like Herodotus, twenty five centuries ago, when the Pharaonic cities shone in all their splendour.

This does not mean that the Egyptians were more skilful builders than the people of the Euphrates Valley. Rather would the contrary be true; but they rightly thought that great architecture cannot without strong materials resist the strain of centuries. The use of granite and of porphyry, the exceptionally enduring quality of materials, the nature of a climate propitious to their conservation, saved the Egyptian monuments from ruin and won their builders an unequalled renown. The first merit of a monumental work is that it shall endure and carry to following generations of humanity the memory of a race or an epoch. The superiority of architecture over other arts consists in the fact that it can give to all its creations a little of that eternity which belongs to nature.

The Egyptians at least had the merit of understanding this. They wished to make durable works and to leave behind them monuments as resistant as the crust of the earth. Their pyramids stretch towards heaven like the rock that supports them, and defy time like the mountains. The temples of Abou-Simbel are not built, but cut into the high cliffs that dominate the Nile, and are literally sculptured mountains. The same tendency is manifest in their statuary. The Sphinx of Gizeh, the most sublime and moving figure ever cut of stone by human hands, is one body with the granite pla-

teau upon which it rests. The rock itself has become animated under the sculptor's chisel and raises its mysterious head above the desert.

Another novelty, rich in consequences, the column, very rare in Mesopotamian architecture and almost always reduced to playing an ornamental part, in Egypt becomes an essential element, indispensable to construction. By this fact, monumental technique and aesthetics are profoundly modified. The halls of temples and palaces will no longer be limited in width, and obliged, as in Assyria, to develop in one direction only in the manner of galleries and corridors. By multiplying these supports it will be possible indefinitely to increase the size of rooms. Forests of columns, sometimes high and massive as towers, will support the ceilings which henceforth can be built of stone and rendered as enduring as the walls. Instead of compact masses of masonry, long blind walls surrounding unshadowed courtyards, we shall see long porticoes and open-work façades.

The Egyptians did not invent the column, but they were the first to see its possibilities. Undoubtedly they were drawn to this by the sight of the vegetation in the Valley of the Nile. The colonnade is nothing other than the stone image of the palm-grove in which tall, smooth trunks support a high roofing of foliage. The word forest comes naturally to mind in speaking of the *hypostyle* order, and indeed this is more than a comparison, for it tells the true origin of the colonnade. The Egyptians never forgot moreover, that the column was the statue of a tree or plant. They always crowned it with a bunch of palms or with an enormous lotus blossom, either fully blown or slightly open.

The richest creation of Egyptian architecture, for which this art draws upon all its resources, is the temple. The sacred edifice, which in Chaldea was but a narrow chapel, here takes on a very different aspect and covers a surface equal or even superior to that of the Assyrian palace, developed upon as complex a plan.

In Egypt, as in many parts of the ancient world, the sacred edifice made to be the *abode of the god* was built upon the model of the human habitation. At the beginning, the Egyptian dwelling was but a single rectangular room covered with a flat roof. This modest structure, not unlike a modern fellah-hut, was early enlarged by the addition of a courtyard and a second room. Henceforth it comprised : 1st. a square enclosure surrounded by a high wall; 2nd. a room, very wide for its depth, occupying the whole rear part of this enclosure, 3rd. a second, smaller room, adjoining the former, but made in the contrary manner, that is, deeper than it is wide. Such dwellings, have been found among the ruins of Kahun.

From this very simple plan the model of the temple is derived. A square court surrounded by a high wall precedes the structure. It is entered through a central door, and usually a truncated pyramid, called a pylon, stands on

either side of this door. At the end of this court, a vast hall, called *hypostyle*, in Egyptian texts is also named the *hall of the apparition* or the *wide hall*. From thence a much less spacious, deep and narrow room is reached, and this, properly speaking, is the sanctuary, in which the venerated image of the god is placed in a wooden ark.

Such is, theoretically, the plan of the temple. In practice, however, it is always complicated by additions. The sacred chambers become surrounded



THE GREAT TEMPLE AT ABOU-SIMBEL

with more or less varied and imposing rooms and passages. Not only the chapel of the ark succeeds the hypostyle hall, but a compact assemblage of secondary localities, in the midst of which the chapel forms but a narrow kernel. The whole is covered by a horizontal terrace, so lifted as to let in the light through occasional spaces. The hypostyle hall itself is sometimes doubled and tripled.

The placing of these several constructions, of which the group constitutes a temple, allows the purpose of each to be guessed. The large court, entered as soon as the pylon of the enclosure is passed, must have been generally accessible to the crowd. The hypostyle hall, although already a sacred spot, seems not always to have been interdicted to common mortals. During great festivities the doors could be widely opened to let processions through. On

the other hand, all the rear part of the temple is jealously closed. Needless to say, the sacred chapel, the Holy of holies, was opened only to the Pharaoh and to the princes of the priesthood; all the adjoining chambers must have been used as dwellings for the priests and as store-rooms for the treasures of the god.

As one advances from the exterior pylon through the temple to the sanctuary, the light gradually lessens, the impression of mystery increases. After the dazzling glare of the court, the heavy columns of the hypostyle hall make a half-light, which in the narrow resorts at the back turns to complete obscurity.

THE GREAT TEMPLE OF AMMON AT KARNAK

This vast architectural group, named in the Egyptian texts "*the thrones of the world*", represents twenty centuries of work. Its foundation goes back at least to the XIIth dynasty (2200 B. C.) The great pylon of the façade was begun at the time of the Macedonian kings, in the second century. In the whole history of architecture there is not another example of so long continued an enterprise.

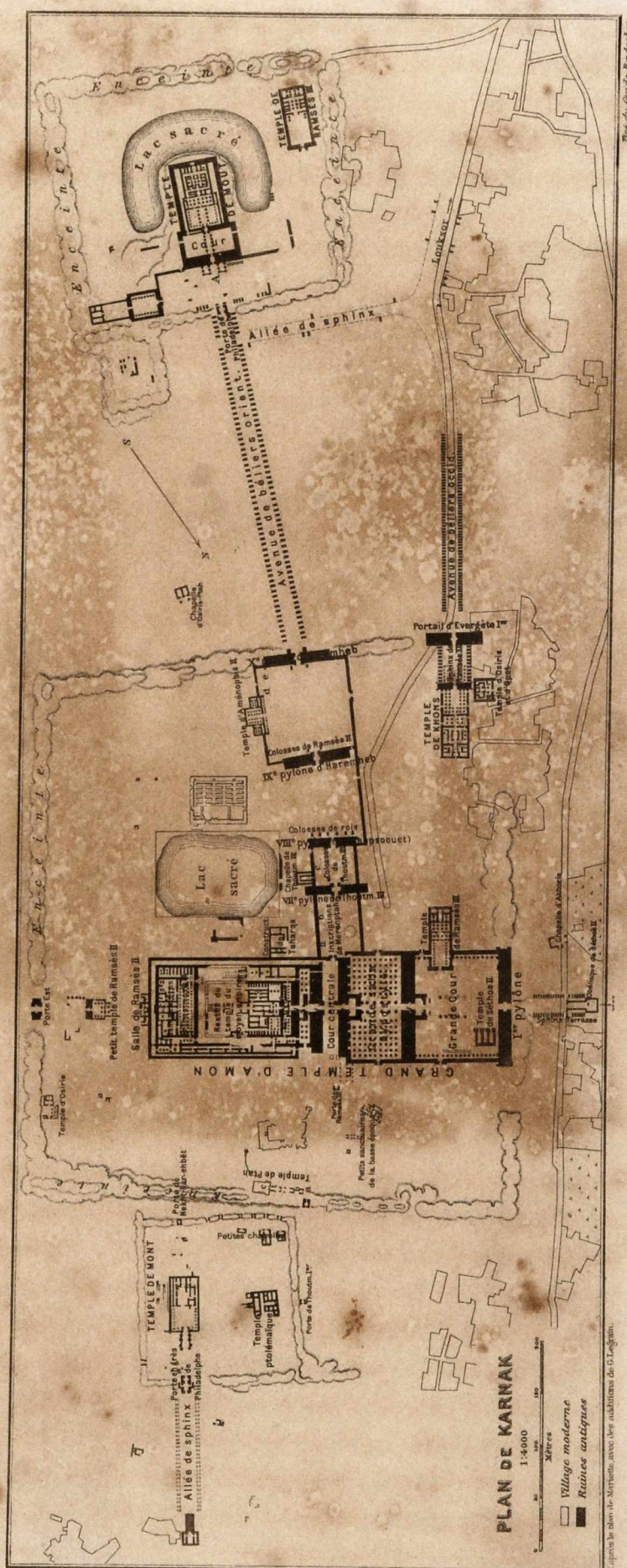
From the side of the Nile the structure is approached by a long avenue bordered with sphinxes, which ended between two obelisks. The first pylon, a gigantic portal, 113 metres wide by 23 high, is thus reached. To right and left, the stone façade was lengthened by the brick rampart of the enclosure, which drew an immense quadrilateral around the aggregate of the temples. Behind, opens the great court, bordered on its two sides by a colonnade. This already unites two secondary temples, that of Sethos II and of Ramses III. At the rear of the court rises the second pylon, similar to the preceding one, but of a slightly lesser height. Its central door leads into the celebrated "*hypostyle hall*", a unique structure which the Greeks would certainly have placed first among the *seven wonders*, had they been allowed to cross the threshold of the temple. It covers not less than 5000 square metres, so that an edifice like Notre Dame of Paris could easily lodge in the interior. The rectangle formed by it is 103 metres by 52; 132 columns, in 16 rows, support the stone ceiling. The central columns reach 24 metres above the ground and raise the middle part of the roof. Their capitals, which received light from the opening between the two levels of the roof, represent gigantic lotuses in full bloom, blossoming as would real flowers in the rays of the sun, whereas the lateral colonnades, a little less high and kept in the shade, have still closed lotus buds for capitals. The shafts of the highest columns are 3 metres 57 cm. in diameter and 10 metres in circumference. These are the dimensions of Trajan's Column in Rome, or of the Colonne Vendôme in Paris.

A third pylon closes the hypostyle hall in the rear; then comes a narrow

courtyard without colonnade, then a fourth pylon, a fifth and a sixth, which separate two more hypostyle halls, less vast than the first, that lead quite close to the sacred chapel. Here the plan subdivides, chambers multiply, ceilings become lower, in uncovered places rise obelisks, giant statues lean against the door-posts. In the midst of this labyrinth, far from the profane, is sheltered the Holy of holies, the narrow chapel in pink granite that contained the skiff sacred to Ammon.

Contrary to the usual custom, the temple, instead of ending in this, is lengthened yet 100 metres in the rear by another vast court, and by a second sanctuary that seems a reduction of the first.

This compact assemblage of buildings, already comprising two sanctuaries joined end to end and closed by a stone wall, yet forms but a slight part of the quadrilateral in the immense brick enclosure. Not far from it, on the South, spreads an artificial rectangular basin. This is the *sacred lake*, frequent in ancient sanctuaries, of which the waters and the fish are dedicated to the god. Near it, a series of



large courtyards enclosed by walls, succeed one another from the temple of Ammon to the Southern door of the great enclosure. They are separated by high pylons made after the usual model. Here and there against portals stand colossal statues of the Pharaohs; then follow the temples of other divinities, Phtah, Khons, Osiris, to whom the god of Karnak offered hospitality beside his own sanctuary.



THE HYPOSTYLE HALL AT KARNAK

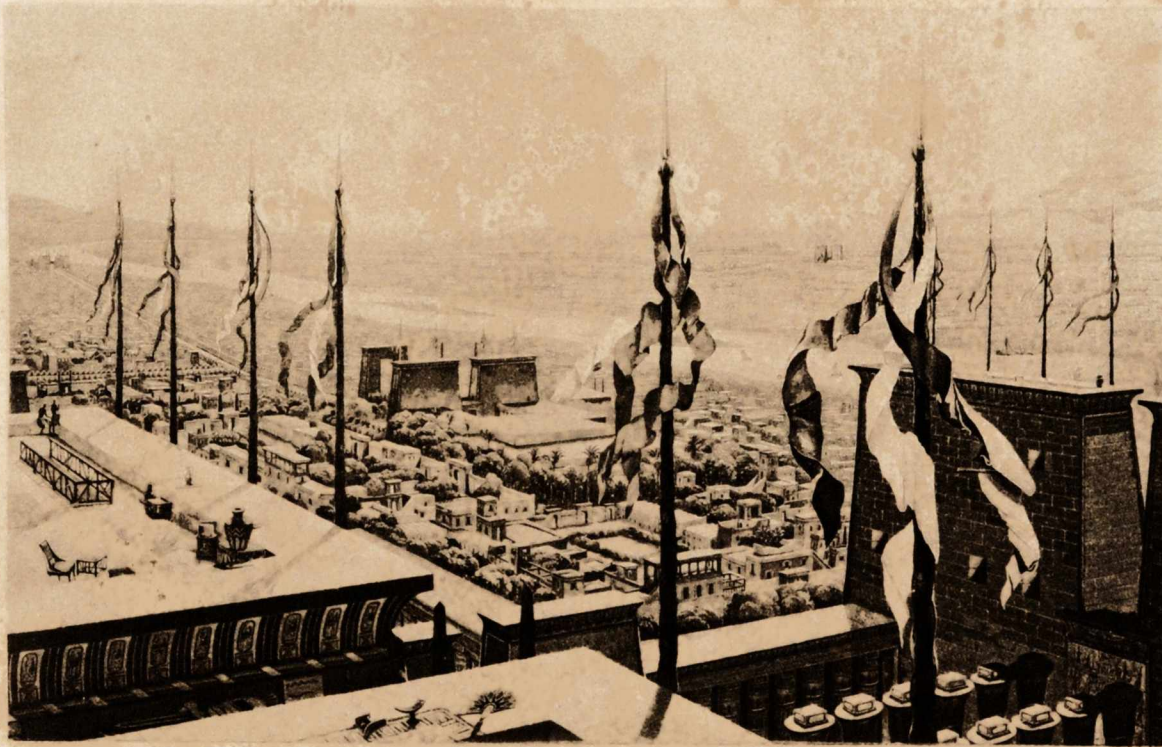
From Hector Moreau.

The avenue which starts from the temple of Khons, to the South-west of the quadrilateral, used once to stretch as far as Luxor, two kilometres from Karnak. Together with the short embankment which binds the shore of the Nile with the first pylon of the great temple, it was the principal means of access to the holy city. Now lost amid palm-groves, it can be traced for only two hundred metres. Of the monolithic sphinxes with ramsheads, that guarded the triumphal roadway, a hundred and twelve are still standing. The entire flock must have num-

bered at least a thousand. No written description could convey a just idea of this group. A general plan makes it possible to grasp the beautiful arrangement, at once regular and varied, of all these buildings, of which one alone would suffice to astonish the traveller. But nothing equals the panorama revealed upon reaching the summit of the great pylon, the view of the immense field of ruins, from the centre of which rises the petrified forest of the hypostyle hall.

Exactly what is this *pylon* that we everywhere meet, before every temple,

or every part of the temples? We have called it a *portal*, and the term is only half exact. Rightly speaking, it is a door, flanked to right and left by two truncated pyramids, very much wider than they are deep. In the interior these two masses of stone cover but a narrow staircase leading to the top of each. They are not towers serving to protect the sanctuary entrance; in them we recognise the *signal-monument*, the structure reaching upwards, that always rises beside sacred places. The most ancient type of *signal* in Egyptian architecture is the obelisk, a monolithic arrow. The pylon replaced and surpassed



KARNAK. — RESTITUTION OF AN EGYPTIAN CITY
From Hector Moreau.

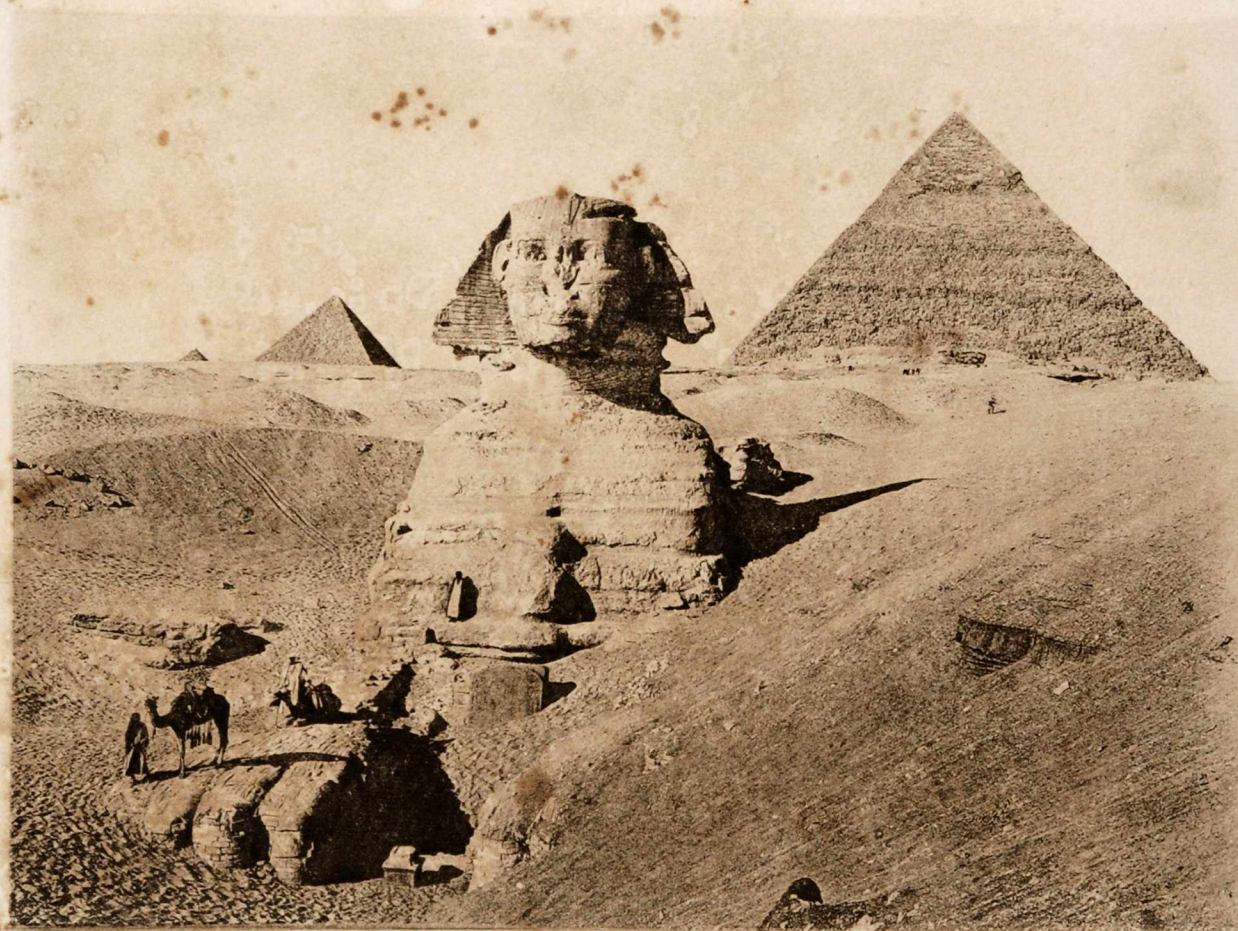
it. Immediately behind the great hypostyle hall at Karnak, still stands the great obelisk of Thoutmosis, thirty metres in height, the largest that has remained till our day. The pylon easily reaches a greater height and marks from afar the site of the temple. The first pylon of the temple of Ammon exceeds the obelisk of Thoutmosis by 3 metres.

THE PYRAMIDS

We cannot leave the Valley of the Nile without at least glancing at the Pyramids of Gizeh, for these represent the greatest effort towards height in all the architecture of antiquity. After having been but a monolithic needle raised beside a sacred precinct, the signal monument becomes truly a mountain, no longer made of earth like the Chaldean Zigurat, but of cut

blocks. The pyramid is the giant sign which indicates the royal tomb and proclaims afar, in space and in time, the majesty of the dead who inhabits it.

Let us remark that the method adopted by the Egyptian engineers is the only one which permits the continual elevation of a structure. The pyramid has this peculiarity, that its height can be indefinitely increased without endangering its solidity, because the base is enlarged in the same proportion



THE SPHINX AND THE PYRAMIDS OF GIZEH

as the summit is raised. No danger of its falling like an obelisk or crumbling like a tower! The higher the pyramid the greater its resistance, for it forms the thicker mass and the more firmly set base. Let us add that this manner of construction in height ceases to be architecture and becomes interesting chiefly to the science of engineering. All aesthetic care is sacrificed to this intention. The work becomes, not beautiful in the usual sense of the word, but striking to the imagination by its prodigiousness, and it satisfies the spirit because it proves human power. The Pyramid of Cheops still stands 135 metres high. A record no other stone structure, except the spire of Cologne and the Washington monument, has ever beaten.

In the history of architecture there is perhaps not a more striking proof of what can be accomplished by the collaboration of human efforts. Such tasks, executed with primitive means without the aid of modern science,

give a pretty good hope for our future. In a society as strongly organised, but capable of contributing the same effort without suffering the same miseries, what monuments will the architects of to-morrow achieve, if they show as great patience and boldness as the engineers of Pharaonic Egypt?

The pyramids have lost their coating which was made of large, even, red slabs. Although this injury does not spoil their silhouette, it is yet regrettable. These slabs bore curious inscriptions which would greatly have interested our statisticians. One of them, a historian reports, mentioned the sum spent by the Pharaoh for the food of the labourers. They had consumed vegetables to the amount of six hundred talents, that is three million eight hundred thousand francs.

IV

THE TEMPLE AT JERUSALEM

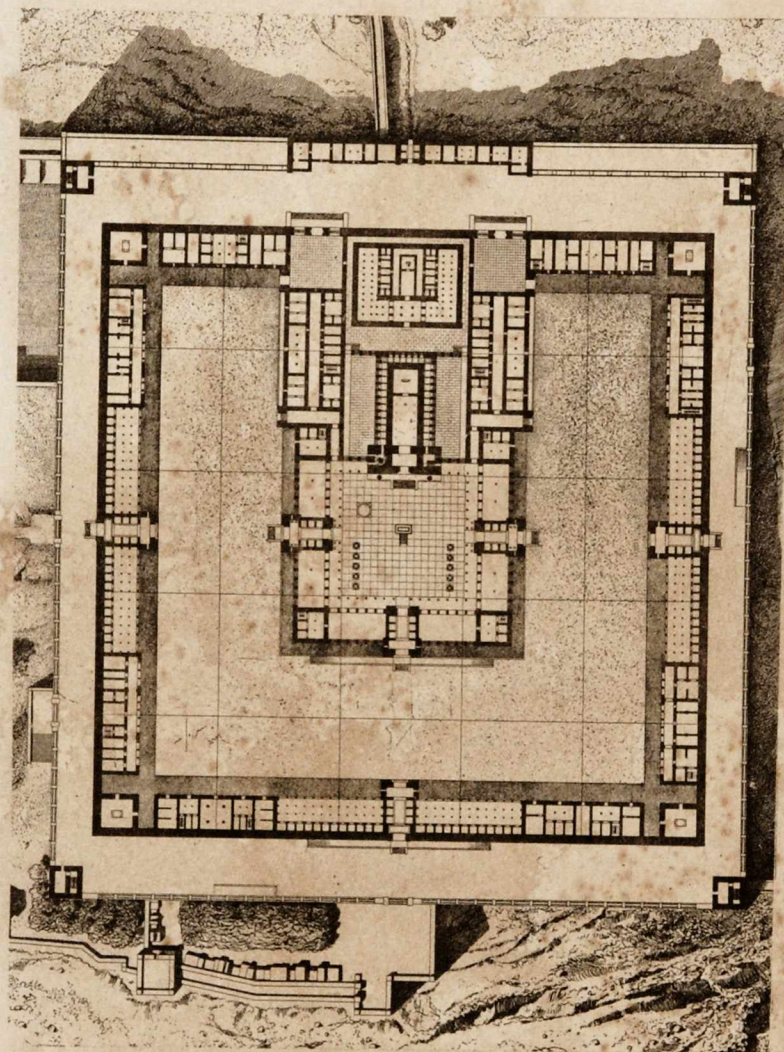
This is a work done in willing cooperation by the Hebrew nation, the first example of a religious ideal expressed in a national monument which synthesises the artistic effort of a whole people.

A special place must be given the Hebrew people in the history of architecture as well as in that of religion. For the first time, we see a nation united in religion, morals and art. The Temple at Jerusalem is constructed to be the only abode of the only and universal God, towards whom all the thoughts of the whole people converge. It is also the single and colossal work upon which their whole resources are employed and their labour is concentrated. The Hebrews desired the Temple of Jehovah at Jerusalem to eclipse all other human creations. Before its existence there was not an edifice in all Palestine worthy of the name : never again was it equalled. The care of kings and of generations, the will of the mighty and of the humble were spent upon embellishing it, and after every destruction, upon raising it again more magnificent than before. It was the long continued and constantly perfected work of the whole people, their refuge and their pride. When the temple was thrown down the nation was stricken to the heart ; but hope returned after the worst miseries when the national edifice was raised again.

It will be seen that the very shape of the Temple of Jehovah bore the marks of its unique and centralising character. The plan is not that of an ordinary building, and does not exactly recall either the Assyrian palace or the Egyptian temple. In its own way it expresses the idea of the only and universal God, for everything converges towards the sacred precinct chosen by Jehovah for his dwelling.

With the Hebrews and in the Temple at Jerusalem we see *national cooperation* becoming organised for a common cause, for the expression of one

idea and the founding of one monument. In the Greek world we shall see *international cooperation* becoming organised. With the height of Roman power *universal cooperation* will begin, in a smaller universe, it is true, than our own, and one which comprised as yet but the countries neighbouring the Mediterranean. Thus, gradually, the organisation of social life, of human labour and of art evolve towards greater centralisation and greater unity of effort.



PLAN OF THE TEMPLE AT JERUSALEM

Restitution by Ch. Chipiez.

In the eleventh year of his reign, at Jerusalem, Solomon dedicated this House of Jehovah. Till then, poor and distracted by wars, the Hebrews had neither time nor means for such an undertaking. David himself, who gave Jerusalem the air of a capital, had left the Holy Ark under the shelter of a simple tent, which formerly was raised over it while it was crossing the desert.

The Temple of Solomon, several times destroyed and rebuilt, was definitely thrown down when the army of Titus sacked Jerusalem. But its location is exactly known and the numerous descrip-

tions found in the Bible permit the reconstruction of the general arrangement.

It stood where now stands the Mosque of Omar. To support it a large square terrace, held in by high walls, was built upon the rocky plateau which dominates the Valley of Jehoshaphat. This quadrilateral was reached by a slope and a great portal on the Eastern side of the plateau. The parapet of the supporting walls made a first enclosure, free to all, called the *Court of the Gentiles*. This square enclosure held two other courts one within the other, of the same shape but of smaller dimensions. From the Court of the Gentiles, a monumental door led into a court called the *Court of Israel*. The Holy Scriptures speak of the high pillars adorning this door. It must be imagined as resembling an Egyptian pylon flanked by two higher and more

slender but similarly truncated pyramids. This form of façade was frequent in Syrian architecture; Syrian churches with two towers preserved it, and



PERSPECTIVE VIEW OF THE TEMPLE AT JERUSALEM

Restitution by Ch. Chipiez.

brought down through intermediaries, it survives in our cathedrals. In this court Israelites only were permitted, but all sons of Israel entered freely. Even when there was no religious service, it served as a public place reserved for members of the Jewish nation. It can be compared to those courts of mosques in which Mussulmen seek the shade of trees and porticoes. Colonnades, shops and dwellings annexed to the temple spread all around it.

A second monumental door, like the first, led from the first enclosure to one noticeably smaller, completely hemmed in by the Court of Israel. This was the *Court of the Priests*. The people were admitted only upon certain days and under certain conditions. It formed a perfect square also surrounded by buildings and colonnades. In the centre stood the celebrated sacrificial altar to which every Hebrew was obliged in many circumstances to bring his offering himself. Not far from this, is the large bronze basin for libations, called the Sea of brass. Along the sides of this court, galleries served as slaughter-houses and sacristies. Ezechiel in his vision of the temple beholds there, " hooks a palm in length where hung the bodies of victims, and upon tables the flesh of offerings ".

The two towered façade of the real temple, the true House of Jehovah stood in the rear. Isolated before it, rose the two celebrated bronze columns, *Iakin* and *Boaz*. The sacred house was divided into two parts. In front was the holy place or *Hekal*, a vast hall some 40 cubits long by 20 wide, the general arrangement of which suggests a Christian basilica; behind it the *Holy of holies* or *Debir*. About the Hekal and Debir, on the three sides opposite the façade, were three rows of cells.

The great hall of the sanctuary was lighted by open bays at the very top of the wall above the roof of the highest cells. Only priests might enter this hall for divine service. But even they had to halt on the threshold of the sacred precinct, the Debir, which was considered the very room of Jehovah, and adjoined it. Only one man in all Israel, the High Priest, might lift the heavy draperies hung before the door. Yet even he had this right but once in the year. It was in this venerated room that Solomon and Ezekiel, after the consecration of the temple, saw Jehovah descend with thunder in the form of a fiery cloud.

The Scriptures praise the extraordinary richness of the *Hekal* which, through gates ajar, might be admired even by the people. In this hall stood two renowned and dreaded statues, the huge bodied and great winged *Kerubs*. These were images of the divine messengers who with the swiftness of lightning lifted Jehovah to the clouds. According to the always enigmatical Bible texts, they may be imagined as analogous to the winged bulls which in Assyria guard the doors of temples.

The historian Josephus, who saw the temple in all its magnificence shortly before its ruin, takes pleasure in describing the cedar-wood ceilings, polished and garnished with golden leafage, the high cornices with bronze sculptures, representing lilies and pomegranates, the sumptuous hangings of purple mixed with gold. Even more admirable, however, than this display of riches, is the very simple and grand arrangement of the plan, which well corresponds to the idea of a monument unique in all the world, intended for the terrestrial abode of the universal God. The Temple of Jehovah is the most perfect type of a sanctuary with concentric enclosures.

The successive walls mark holier and holier places, less and less accessible to the crowd; only one man might lift the veil from the last door opening into the sacred precinct, centre of the sanctuary, of the temple, of the city, of the nation, of the world.

V

CLASSIC GREECE. — THE GREAT SANCTUARIES

In the Greek world international collaboration becomes organised for the first time. The nations of the Greek race, in spite of their political rivalries, form a vast group united by the moral bond of thought, of religion and of an ideal in common. The great sanctuaries at Athens, Delos, Delphi and Olympia are the common work of these nations, and become their meeting places.

On the long road of social progress the greatest distance has been traversed by the Greek race. The religion and philosophy of this chosen people tended to liberate body and mind from all former subjection; they demanded the full expansion of life and of human activity in freedom, strength and beauty. This ideal, common to the peoples of Greek blood, created an indissoluble bond between rival cities and, in spite of political dissensions, drew them together for the accomplishment of intellectual works. In a word, this ideal founded the moral unity of the Greek world. To these new preoccupations, to this unprecedented understanding between several nations correspond monumental constructions also of a new character.

The vast structures of Oriental cities had been jealously reserved for gods or for despots. In Greece, architectural buildings, temples, porticoes, stadia, theatres, became accessible to the mass of citizens, were built for their comfort and the delight of their eyes. If we embrace in a single glance the history of monumental art in ancient times, this appears as one of the most striking characteristics of Greek buildings. A new social organisation, based on equality and democracy, required of the architects plans of a different order from those to which the Oriental builders had been restricted.

Another peculiarity of Greek work is that it never impresses us by its immensity but by its sense of proportion and the perfection of its workmanship. The Greeks learned how to inspire the feeling of majesty without exceeding ordinary dimensions. They possessed something rarer than the power or daring that produces colossal works: an accurate sense of style and proportion. In architecture they created types of building, models of decoration of such rare beauty, that, for more than twenty centuries, all succeeding nations have unwearyingly copied them. To the cutting of stone they devoted unprecedented care. Their most beautiful structures are real jewels, the

precious material of which is carved with extreme minuteness. In building their temples they fashioned the marble with the loving care of a sculptor carving a statue. Their walls are no mere pilings up of blocks of equal size. Each stone is joined to its neighbour by unseen iron or bronze cramps, cemented with lead. So the whole edifice forms but one single large marble body, kept in place by metal bones.

In classic Greece the largest sanctuaries, the Acropolis of Athens, Delos, Delphi, Olympia, cover an area hardly larger than that of an ordinary town square. In Mesopotamia, and in Egypt, when the architect designed a palace or a temple, he merely joined together a greater or less number of buildings. In this way a vast edifice was obtained, forming a single block and covered by a single flat roof-terrace. The architects employing this system almost always erected in the vicinity, other slender monuments, such as the obelisk, the zigurat, the pylon or the pyramid.

In developing their large monumental groups from isolated dwelling-houses, the Greek architects proceeded in an entirely different manner. They always composed them of separate buildings, sometimes very close to one another but never joined together. Hence there are no immense buildings on an extremely complicated plan such as we found at Khor-sabad and Karnak. On the other hand, the architectural landscape gains a picturesqueness unexampled elsewhere. No immense monotonous walls, none of those cubic masses, as heavy as the cliffs. The buildings with trees and statues between them, present a variety of outline, and face in different directions. Finally, the pointed roof with its triangular pediment, agreeably diversifies the monotony of the horizontal lines. The high gable of the temple crowned with statues, flying figures or great sculptured ornaments is visible from afar off. There is no need to erect a slender signal beside it like the obelisk or the tower. Less immensity and more beauty, is the formula of Hellenic in contrast with Oriental art.

THE GREAT GROUPS. — SANCTUARIES. — THE ACROPOLIS OF ATHENS

Let us first ascend the Athenian Acropolis, whose venerable ruins still attract so many pilgrims. It is only a small rock of red limestone, formerly crowned by the hut of a tribal chief. When the village at its foot became a borough, and later a town, a better built house replaced the chieftain's hut. This is what Homer styles the strong residence of Erechtheus. Next, walls surrounded the crest of the rocky plateau. It was a stronghold where the dwellers in the Attic plain could find a speedy refuge from the pirates of the sea, or the hordes descending from the North. In this enclosure the goddess of the modest city, Athena, had her temple. A tyrant and patron of art, Pisistratus, adorned it with care, and erected round about statues of gods, heroes, and charming figures of young girls dressed in their

most beautiful robes. Then came the horrors of the Persian invasion. Athens was taken and devastated, and while in the Bay of Salamis the Athenians gave battle to the enemy, that final battle that was to decide their fate, they saw in the background their citadel smoking and in ruins. After the victory, and in honour of the liberating goddess they built on the Acropolis, no longer a fortress, but a sanctuary which was to be the most beautiful of Greece, and in which they desired to unite the most perfect masterpieces of all the arts. The ancient wall, covered over with earth, became the substructure of an immense terrace. The ancient citadel thus levelled and extended, assumed the form of a pedestal on which temples were erected like statues. The honour of this architectural design, which has nothing colossal about it, but which is of incomparable beauty, is specially due to Pericles. In a few years there rose from the earth those marvels of monumental art, the Propylaea, the temple of the Wingless Victory, the Parthenon and the Erechtheum.

The Propylaea occupies the front of the Acropolis, forming the gateway to the sanctuary, no fortified gate, flanked with towers, but a wide shady vestibule, formed of many colonnades, some Ionic, others Doric. From there could be seen the city crouched at the foot of the citadel, the whole ring of mountains encircling it, and to the West the Gulf of Salamis, the sea which had witnessed the heroic struggle. In the shadow of these sculptured colonnades, with this view, unmatched in the world, stretched before him the poorest citizen felt himself rich and proud with all the wealth and the pride of the city.

Quite near by, on a narrow bastion projecting from the wall, to the South of the Propylaea, the fine columns of a charming, little Ionic temple raise their delicate outline. This is the little temple of the Wingless Victory, or more accurately, Athena-Niké, a divine figure personifying at once the patron of the city and the goddess of Victory. The friezes running round the entablature of the edifice represent legendary or historic fights in which the Athenians had triumphed through the help of the Virgin warrior. On the sculptured balustrade which surrounded the bastion, winged Victories celebrated sacrifices or fastened on their sandals in preparation for flight.

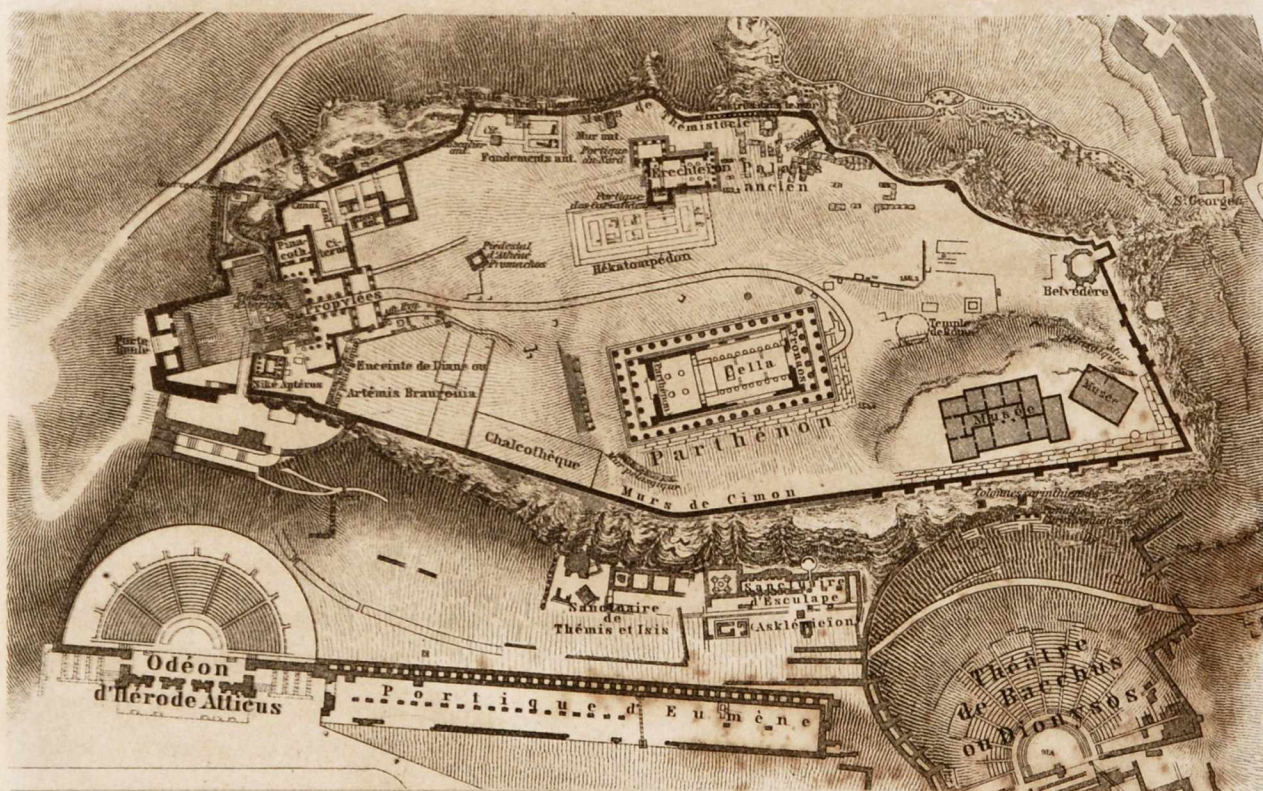
On passing through the Propylaea, the Parthenon and Erechtheum come suddenly into view. These are the two great temples of the Athenian goddess. Neither their outlines nor their position is symmetrical. The Parthenon is first seen on the highest point of the rocky plateau. It is scarcely necessary to describe its Doric façade, the sculptures, unique in the world, that adorned its triangular pediments, the admirable frieze running under its colonnade and representing the whole people of Athens advancing in procession to the festival of the goddess. Nothing could be simpler than the plan of the building. A large oblong, rectangular hall, preceded and followed by two chambers of equal width, but shorter.

In the principal hall there stood a large statue of Athena, her flesh of ivory, her mantle of gold, holding in one hand lance and buckler, in the other a winged victory. All round the monument there was a Doric peristyle of forty six columns. The central hall formed the dwelling of the



Neue photographische gesellschaft.

ATHENS. — GENERAL VIEW OF THE ACROPOLIS, WEST SIDE



From Baedeker.

ATHENS. — GENERAL PLAN OF THE ACROPOLIS

goddess. The peristyle sheltered the crowd and made a promenade open to all and the temple itself opened its doors to all the worshippers. In its greatest length the building does not exceed 80 metres. The columns are not six metres high. These figures seem trifling, when we come to Greece, as we have just done, after visiting the ruins of Egypt and Mesopotamia. They have not hindered the Parthenon from compelling men's admiration throughout twenty four centuries and being reckoned the uncontested masterpiece of architectural art.

A little further back, North of the Parthenon, stands the Erechtheum, a building of unusual type. It covered the sacred enclosure where Poseidon and Athena, each claiming the possession of Athens, called from the earth, the first a spring of water, the second an olive tree as offerings to the disputed land. There also, it would seem, the most ancient idol of Athena was preserved. To one side of the monument is attached the graceful *Tribune of the Caryatides*, a kind of portico, the frieze of which is supported by admirable statues of women. The grace of these figures, the deep cut decoration of the temple, the lightness of its Ionic order form the



GENERAL VIEW OF THE ACROPOLIS

Restoration by M. Marcel Lambert.

happiest contrast with the simple and severe majesty of the Parthenon.

Scattered among the buildings of the Acropolis stood many statues. The most celebrated was that of the *Athena Promachos*, the bronze crest of which was seen by sailors long before they came into port. The greatest sculptors of Greece had there dedicated some of their works. Let us note this feature, foreign to Oriental civilisation : the sanctuary of Athena was for the Athenians also the temple of the Arts. While honouring its gods, the city built an incomparable Museum for the people.

DELOS

In the midst of the Archipelago, on a barren rock, buffeted by sea and wind, stood one of the most illustrious sanctuaries of Greece. It was there, the story went, that the two children of Latona, Apollo and Arte-

mis were born. To the temple which arose in that desert island upon the sacred site, all the heroes of the Epic Period, and later all the States of Greece, and even Oriental monarchs came with offerings. Whilst the Acropolis was the citadel of Athens, Delos was the common sanctuary, the national place of pilgrimage for all Greek cities. Each town had its *treasury* there, a kind of temple in miniature, to which the offerings made by its citizens were brought. The treasures from the islands of the Archipelago



THE STATUE OF ATHENA IN THE PARTHENON

Restoration by M. E. Lioyot.

were disposed in a circle round the great Temple of Apollo, like the Cyclades around the holy island. One entered through a portico that may be compared with the Athenian Propylaea. Thence a paved path led to the heart of the sanctuary, threading its way past the altar, the statues of bronze and stone, the trophies of victory and the votive offerings of all kinds dedicated by the pilgrims. The most celebrated of these monuments was the colossal statue of Apollo, ten metres high, that the inhabitants of Naxos carved out of a single block of marble and brought to Delos in their ships. Amongst the ruins of Delos, early laid waste, this stone giant remained erect. It was a nude figure in the rigid attitude of the Archaic statues, with steadfast forward gaze, its arms fixed to its sides, its fists clenched. It remained almost intact until the day the Venetian sailors attempted to load it on their ships. After being dragged along for some yards, it fell to the ground and broke. The headless torso still stands, tall and broad, like a wall, not far from the Temple of Apollo.

Within and without the sacred enclosure wide colonnades served as shelter for the vast crowds of pilgrims and merchants. Further on, rose a commercial city. On the shore, below the long platform on which the temples rose, a fairly large port was made, the displaced pier of which still emerges from the waves. The sanctuary enclosure was first surrounded by shops and stalls, such as were seen in the Middle Ages propped against the walls of cathedrals. Next there rose a real town with white houses stretching themselves out round the port over the amphitheatre of hills. Above, dominating the whole island, rises a hill, the Cynthus. On it a temple was built while upon its slopes, other buildings were grouped. There foreigners dwelling in Delos, honoured their national gods. It was the sanctuary of foreign divinities. Egyptian, Phrygian and Syrian rites were there celebrated with no less pomp than those of Apollo in the temple near the port. Half way up the hill, a large marble theatre spread out its fan of tiers.

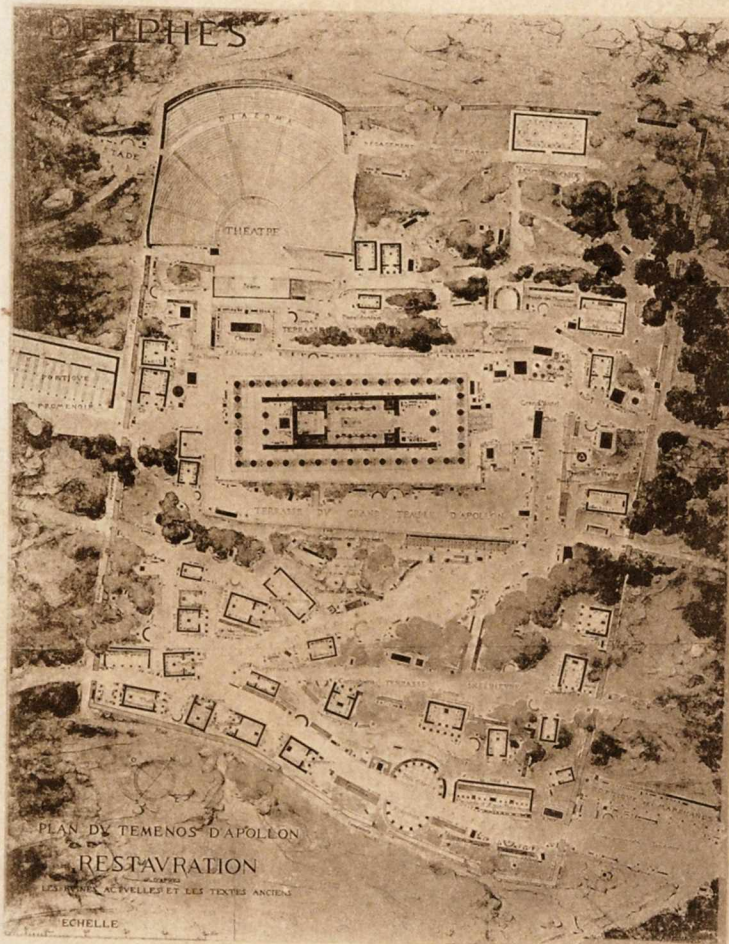
In this immense group, which included a port, a town and several large sanctuaries, there is no indication of a plan formed at any one time. The island was gradually covered with buildings. No architect pre-arranged their grouping. The Greeks had not yet learned how to plan out large cities. But their innate sense of the picturesque led them to evolve slowly and unconsciously monumental conceptions of undeniable beauty.

DELPHI

The same picturesque character is presented by another great sanctuary, likewise consecrated to Apollo, that of Delphi. The site is wild, almost forbidding : the side of a ravine on the slopes of Parnassus, not far from the Gulf of Corinth, the blue line of which can be seen from the heights. Two equally uneven roads lead to it, one coming from Eastern Beotia and Attica follows mountain passes, utilises torrent beds, and clings to the denuded rocks, the other ascends towards Delphi from a little port hidden at the foot of a loop.

The sanctuary enclosed by a stone wall as at Delos, rises in rows along a slope of extremely steep rock. Its buildings are arranged in tiers, sustained on narrow terraces and backed against the mountain with just enough space for their foundations. The earthquakes which still shake Parnassus have long since reduced them to heaps of ruins, but the plan of each and the arrangement of the whole is seen at the first glance. The enclosure is almost rectangular, with the entrance on the lower side. A simple gateway in the wall gives access to the *sacred way*, paved with broad flagstones, which zigzags up to the sanctuary. First it passes between groups of statues, offerings dedicated to the Delphic Apollo by

the various Greek cities. The worship of the god of Delphi as that of Delos was common to all the Hellenic peoples. Athenians, Spartans, Ionians and Sicilians sent hither the tithe of the booty won by them in battle; friends and enemies met within the sacred enclosure; constant emulation urged the cities to surpass their rivals in the offerings they consecrated. The richer towns had their *treasuries* here, as at Delos, buildings belonging



PLAN OF THE SACRED ENCLOSURE. DELPHI
Restoration by M. A. Tournaire.

to them and built at their expense to hold their offerings. Some, in spite of their modest dimensions, were real marvels of art, all incrustured with precious sculpture. Here and there rose statues of heroes, winged victories and sphinxes, on high columns. A wider platform, dominating all the others, upholds the ruins of the great temple of Apollo. This was the heart of the sanctuary; the enclosure, however, included other structures and at last the tiers of a rather large theatre. A little above, the temple the *Cnidians' Lesche* might be visited; this was a sort of closed portico, in which were exhibited frescoes by Polygnotus, one of the greatest of Greek painters.

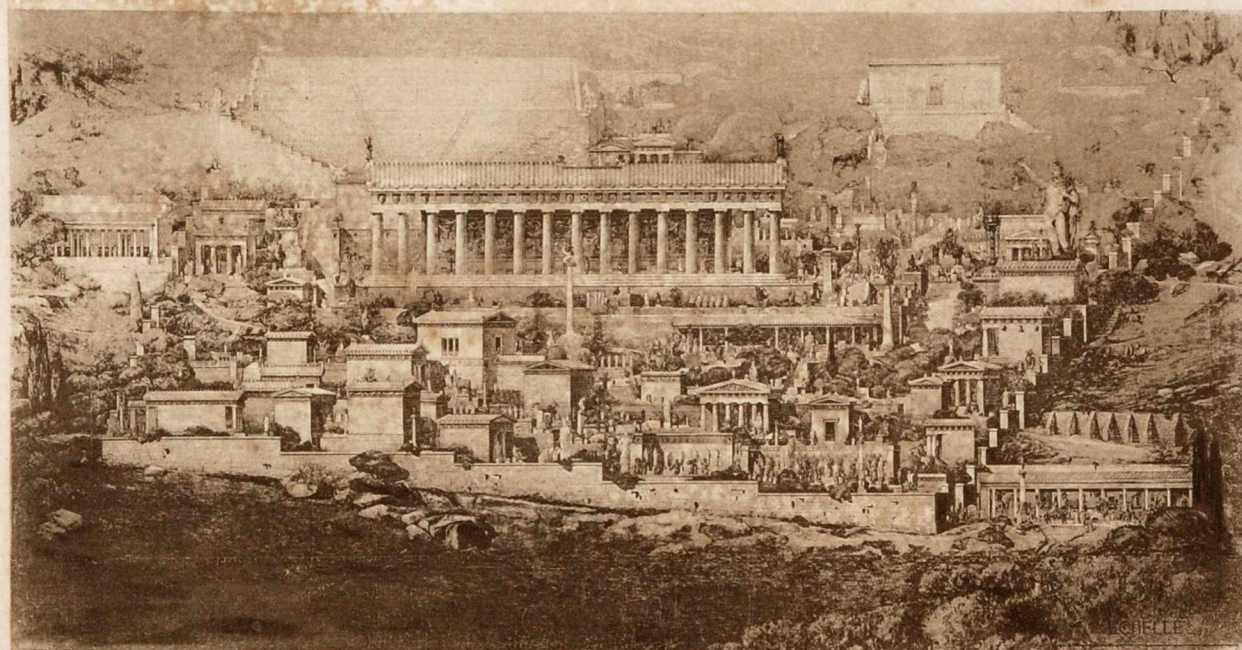
The theatre served for scenic representations and for musical competitions which formed the accompaniment of every great solemnity in Greece, clearly attesting the artistic character of the Greek religion and its festivals. All homage rendered to the divinity became the pretext for some manifestation of art; what the crowd of pilgrims looked for in such sanctuaries was not only the protection of the god but the matchless spectacle of works of every age and every character there assembled.

Not far from the theatre, in the North West corner of the enclosure, an exit leads to a large platform, where still stands a long circus, a stadium, with stone tiers.

OLYMPIA. — THE CITY OF THE GAMES

A city, neutralised and especially arranged with a view to the games; a sort of international gymnasium, where even rival and hostile nations met for athletic competitions, this is what modern nations have not yet realised and what Olympia was for the peoples of Hellenic race.

The name of this poor borough of the Peloponnesus was made as illustrious as that of the most powerful cities, and nothing was more just. The



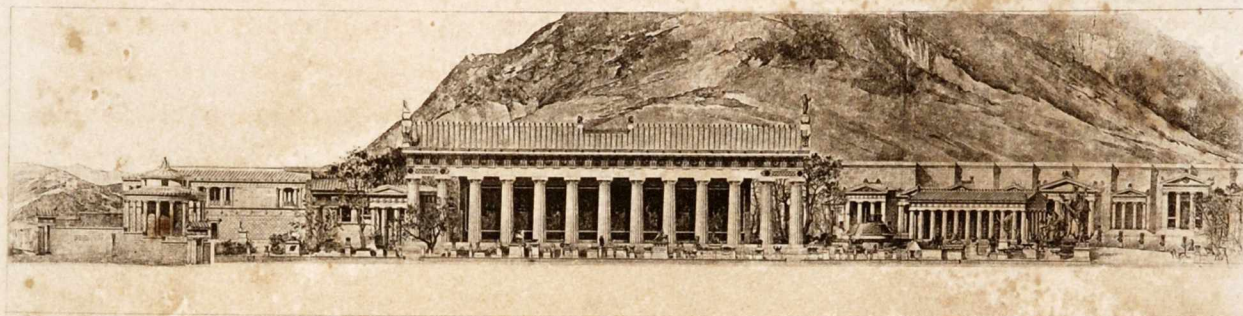
THE SACRED ENCLOSURE AT DELPHI

Restoration by M. A. Tournaire.

institution of the Olympic games certainly marks a great moment in the history of civilisation. It does not only show us the remarkable taste, the passion the Greeks had for sport; it shows us that physical as well as intellectual culture was in ancient days a cause of social progress, a road towards concord and humanity. The religion of the Greeks, compared with those of the Oriental nations, is characterised by the fact that its practice, instead of terrifying the masses, was a benefit to all by reason of the spectacles and amusements which accompanied it. At Delos, Delphi and the Acropolis, we saw the sanctuaries of Apollo and Athena become real museums. Olympia is not only a temple of Zeus, but also the city of the games. A place of pilgrimage, a museum of art and a gymnasium, such is the threefold character of this beautiful architectural group. Art loses none of its rights, in the city of sport, because in the eyes of the Greeks it was inseparable from physical culture. It was their delight in athleticism that urged them to the minute study of the human form, and made them the first sculptors of the world.

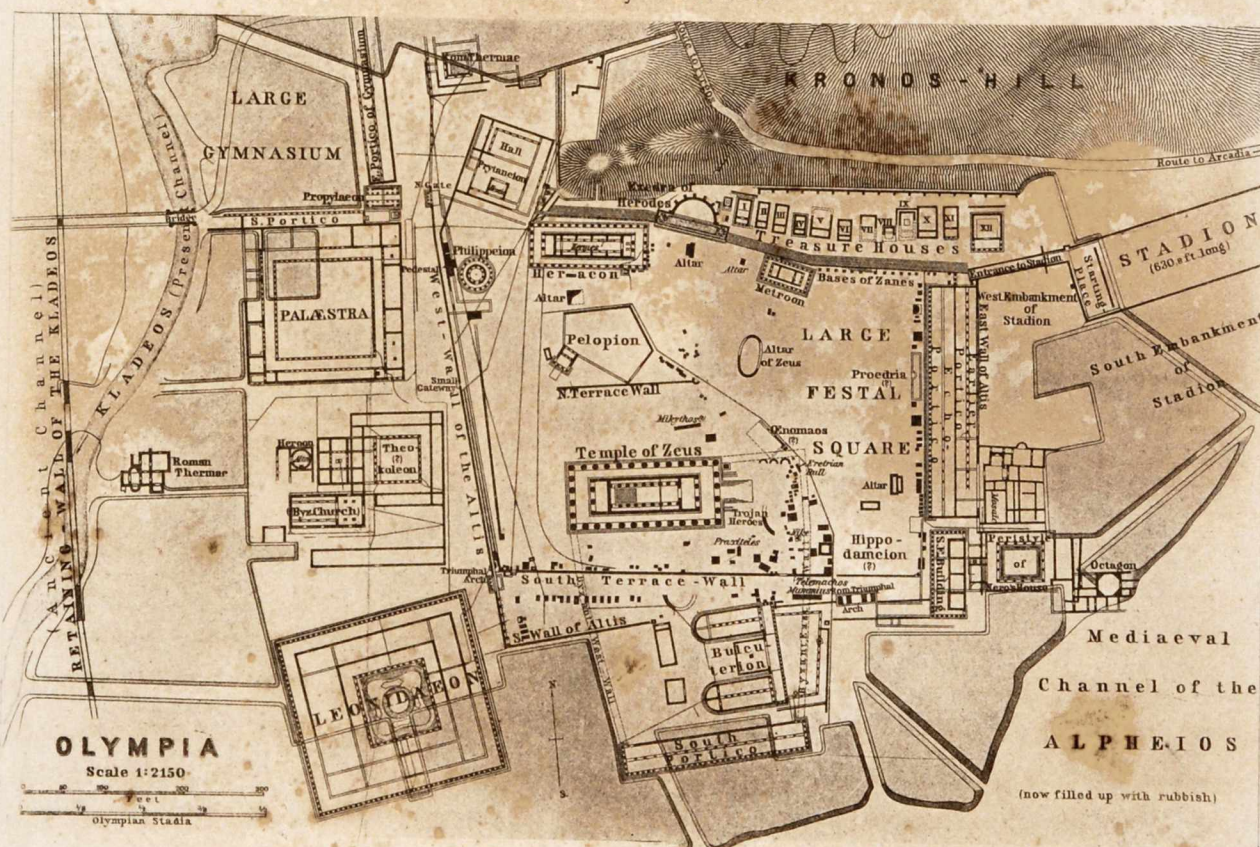
The sanctuary was sheltered in a laughing valley, at the foot of a wooded

hill, at the junction of two rivers. As at Delos and Delphi it includes a large temple, that of Olympian Zeus, and a whole series of secondary edifices. There also the Greek towns had each their *treasury*. Not far from the great temple, rises the altar of Zeus, a large high mound on which the ashes of hecatombs were heaped. Round about the sacred enclosure are grouped the



THE SACRED ENCLOSURE AT OLYMPIA

Restoration by M. V. Laloux.



From Baedeker.

GROUND PLAN OF THE SANCTUARY AT OLYMPIA AND ITS SURROUNDINGS

gymnasia and the various buildings utilised for the festivals of the games. On one side is the quadrilateral palaestra surrounded by porticoes, where the athletes wrestled and boxed. Near it a very long covered gallery allowed the racers to practice in the shade and gave shelter from the rain. In another part were the large stadium, surrounded by tiers of seats, and the hippodrome where the great races took place at the festivals. Almost everywhere were large porticoes where the crowd of pilgrims mingled with the throng.

The devotion of worshippers and the pride of the prize winners had peo-

pled all these buildings with works of art. Under the colonnades or under the trees of the avenues, numberless statues of victorious athletes might be admired. Passing them in review one might study the whole history of Greek sculpture from the beginnings of art and sport in the 8th century before our era. In this international museum at the time of the races and the *sacred truce*, every people found themselves again in presence of the most beautiful memories of their history, trophies of the games and trophies of battle. Inside or on the walls of the sacred buildings some of the finest masterpieces of Greek plastic art were to be seen. In the pediment of the great temple was the admirable combat of the Centaurs and the Lapithae : in the mysterious shadow of the cella, the statue of Olympian Zeus, the masterpiece of Pheidias. Some precious remains of these sculptures, by chance surviving the downfall of the holy city, suffice to-day to make the little Museum of Olympia an artistic resort without a rival in the world.

GREEK MONUMENTS OF ASIA MINOR. — THE MAUSOLEUM
THE TEMPLE OF EPHEBUS. — INTERNATIONAL ARTISTIC COMPETITIONS
INTERNATIONAL SUBSCRIPTIONS

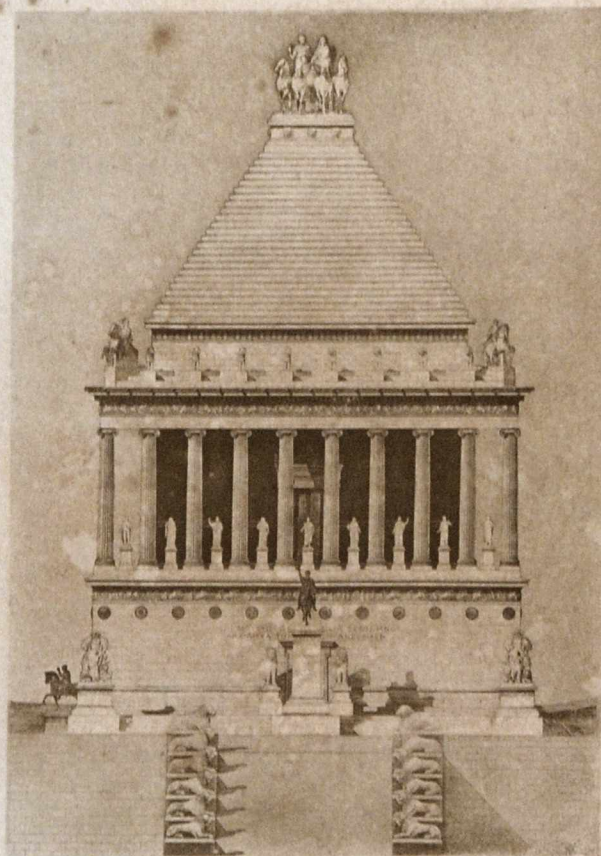
In Asia Minor, in the rich cities of the sea-board colonised by the Hellenes rose edifices unparalleled in continental Greece. This section of the ancient world came simultaneously under the influence of two great centres of culture : the East and Greece. Here for the first time meet and combine in works of composite character the diverse tendencies we have observed on the one hand among Greek architects, on the other in Egypt and Mesopotamia. The *Mausoleum* is a striking example of this Eastern Greek Style.

It was built in Halicarnassus by Artemisia, Queen of Caria, to serve as a tomb for her husband Mausolus. The Greeks placed it among the seven wonders of the world, and because they held it the most glorious of funeral monuments, the name Mausoleum became synonymous with tomb. It may be defined in a few words : it was a peristyle temple, surmounted by a pyramid with steps. The colonnade, in the most beautiful Ionic style, takes us back to Greek models, the pyramid to the Egyptian tombs or the zigurats of Assyria. From base to summit, the height of the monument must have been about fifty metres. A great vertical platform supported the colonnade. The peristyle had altogether thirty six columns. In the interior a marble group represented the King and Queen of Caria standing in a chariot drawn by four horses. We may see the admirable remains of this work now in the British Museum, with much beautiful sculpture that adorned the other parts of the tomb. It is a curious fact in the history of architecture that a kind of competition was held between four of the greatest sculptors of the world for the decoration of the four faces of the monument. The North side, Pliny

tells us, was entrusted to Bryaxis, that of the East to Scopas, the South to Timotheus and the West to Leocharès. Each did his best to maintain his reputation against his rivals, and the public, called to judge of the artistic contest, did not know to which of the four masters to assign the victory. It is the first example of a great international competition for the decoration of a monument.

Another *wonder of the world* was the famous temple of Ephesus, dedicated to the goddess Artemis. In 356 before our era, a madman burned the

ancient Ephesian sanctuary, said to have been built by the Amazons. The Greek colonists of Asia, who revered this place of pilgrimage, decided to unite in reconstructing a temple more magnificent than the original one and destined to be unrivalled in the Hellenic world. Donations flowed in from every side. It was a national subscription; women sold their jewels to offer the price to the goddess; even the poor brought their alms. A colossal work was then undertaken which took two hundred and twenty years for its completion. The temple was of the normal Greek type, with an Ionic peristyle. Its hundred and twenty seven columns, offered by as many kings, were sixty feet in height. The bases of the shafts of thirty six of these columns were ornamented with large



THE MAUSOLEUM OF HALICARNASSUS

Restoration by M. L. Bernier.

figures in high relief. The sculptures which decorate the edifice were entrusted to such masters as Praxiteles. The roof was all of cedarwood and alone represented the cost of an ordinary temple.

What is most interesting for the historian of art in this work, is not so much the magnificence of the structure itself as the circumstances of its construction. To build the Mausoleum of Halicarnassus and make it as beautiful as possible, a sort of international competition had been opened among the artists. At Ephesus, the great temple was built by international subscription, in a fine movement of emulation between peoples and kings. In Egypt and Assyria, great structures were the work of ambitious despots, desirous of showing their power and wealth. In Greece it is the whole nation that desires and exerts itself to realise them, through love of

great and beautiful things. The prince and the man of the people were equally enamoured of them, the sight of these monuments in which the artistic genius of the race was manifested aroused in both the same joy and the same pride.

VII

MONUMENTAL ART IN THE TIME OF ALEXANDER AND HIS SUCCESSORS

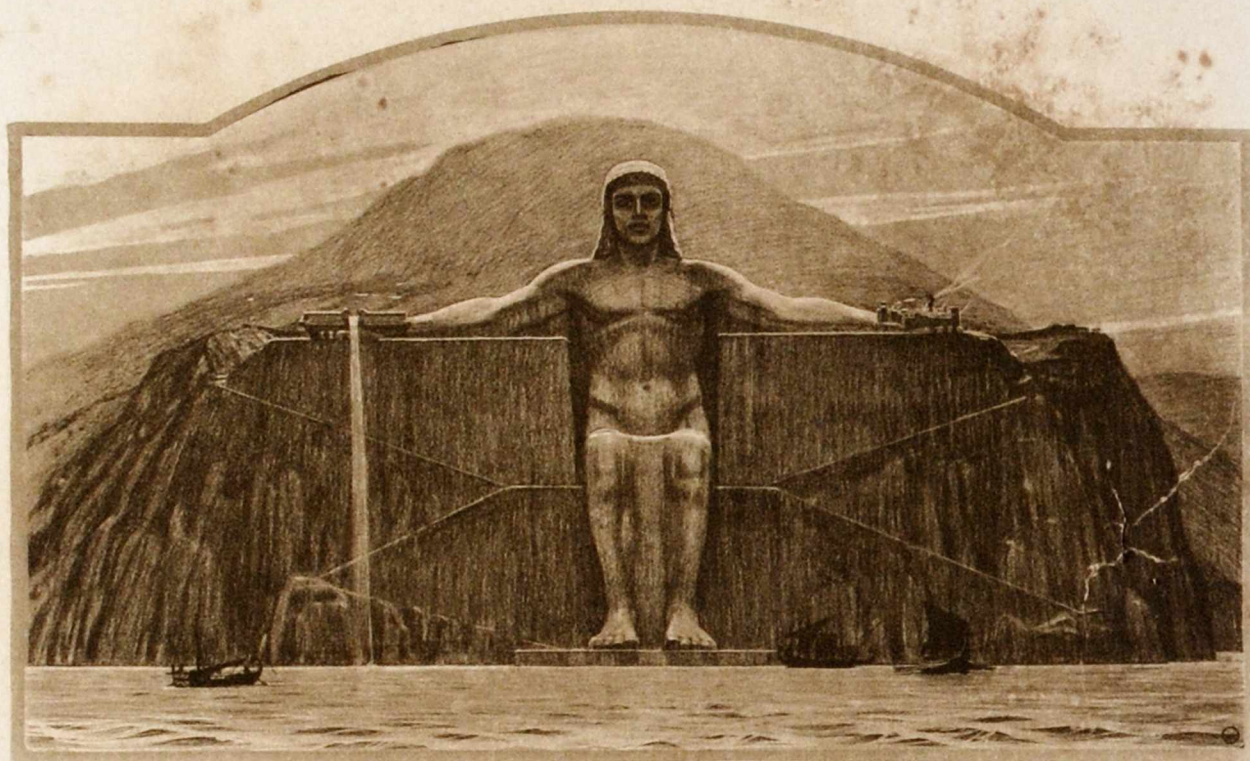
A project of universal empire momentarily realised. New progress in centralisation. Alexander wishes to found an intellectual and political capital of the world at Alexandria. Architectural conceptions of the time correspond to the power and grandeur of the new empire.

We have just seen that several nations in Greece came to an understanding among themselves. In the time of Alexander, all the civilised peoples of the ancient world were united under the domination of a single master. This domination was ephemeral, but subsequently it had a strong and enduring influence. The Macedonian empire was soon dismembered, but it brought together forever nations that had been ignorant of one another. By this the union of the ancient Orient and the Occident was accomplished. These two worlds, hitherto closed to one another, united their religions, their ideas and their arts. The Macedonian conquest did not found the political unity of the old world, but it prepared its moral unity. Alexandria was not the political capital of the world, but it long remained a home of the arts and of thought, common to all nations, a rendez-vous and a spot of agreement for races till then separated. This new centralisation had the most marked consequences in the domain of monumental art.

Oriental architecture was influenced by Hellenism, that of Greece received impetus through the discovery of what the nations of the East had produced before it. The architects of Classic Greece might be reproached with the smallness of their conceptions, but now on contact with Oriental civilisation, they enlarged their designs, and acquired a taste for colossal groups. When the ancient world fell under the dominion of a single master, the idea of universal art took life. Its architects dreamed of gigantic works corresponding with the majesty of the new empire and surpassing in size all that the nations of the East and the West had as yet realised.

In this respect, an anecdote related by Vitruvius is very characteristic. "When Alexander had subjected all nations to his law, a Greek architect, named Dinocrates, left Macedonia to find the king and make himself known to him. Having obtained letters of recommendation to the court from his friends and relations, he immediately asked for an audience with Alexander. "I bring you a design for execution which will be worthy of your fame,"

he said. "I want to make a colossal statue out of Mount Athos, the figure of a man. His left hand will hold an entire city with its walls, and his right a basin into which all the watercourses of the mountain shall flow to cast themselves thence into the sea." Vitruvius adds that Alexander did not consider the project absurd, but judged it impracticable because Mount Athos does not produce enough corn to supply a large city. However, he congratulated the architect on the grandeur and daring of his idea and at once att-



THE PROJECT OF DINOCRATES
Evocation of H. Rapin.

ched him to his service. When he resolved to found a new city at the mouth of the Nile, he commissioned Dinocrates to prepare the plan.

Almost nothing remains to-day of ancient Alexandria, but classic authors have described its magnificence. A harbour, a town and an immense palace of arts and sciences, called the Museum, were at once constructed there. At the entrance of the port, on the island of Pharos, rose the celebrated square tower which was the first lighthouse.

Another of these marvels was the famous *Colossus of Rhodes*. Although enormous, it did not approach the dimensions of the statue dreamed of by Dinocrates, but it became more than an audacious project. The reports concerning it are uncertain and often contradictory. If they give us a confused idea of the work, they nevertheless attest the strong impression which it produced upon contemporaries. The giant statue represented Apollo. Doubtless we must imagine the head of this god with an aureole of rays, as it is

represented on the Rhodian coins. Pliny, who seems to quote from ocular witnesses, tells us that the fingers of the colossus were of the size of an ordinary statue, and that few people could with both arms reach around the thumb. The whole body was thirty two metres high.

It is said that the sculptor Charos of Lindos spent twelve years in modelling this figure and in casting the immense mass into bronze. The statue was hollow, but enormous blocks of stone were so arranged inside as to keep it in equilibrium. It was erected in 280 B. C. Fifty six years later an earthquake threw it down. The Rhodians cared little to raise the heavy mass at great expense when another earthquake might again overthrow it, and so obtained that an oracle should forbid them to touch it. The fragments stayed where they were till 923 A. D. Enormous crevices, as wide and deep as caverns could be seen in the sides of the Colossus. Finally a lieutenant of the Calif Othman IV, named governor of the island, desired to rid the harbour of this ruin. He sold the bronze fragments to a Jew of Emesus, who carried them off, nobody knows where, borne on the backs of nine hundred camels.



THE COLOSSUS OF RHODES
Essay of restitution by H. C. Andersen.

To find an analogous work and one of as great a reputation, we must wait till the end of the 19th century. The colossal statue of Liberty which holds its torch at the entrance of New York harbour recalls the statue of Charos by its position and its enormous proportions.

PERGAMOS. — A GREEK TOWN OF THE SECOND CENTURY BEFORE CHRIST

The division of the empire of Alexander was no obstacle to the advance of monumental art, nor did it modify the character this art had assumed under the Macedonian power. The rival monarchies which ruled Greece and the East made the raising of splendid capitals their boast. Everywhere

at one end. On the steepest side of the Acropolis still stand the tiers of a very large theatre. From the level of the stage and the orchestra downwards extended a long terrace edged with colonnades. It was at the cost of long labour that all these buildings were placed on the steep hillsides. There was even greater difficulty in finding on this rocky soil the site for a gymnasium. It was necessary to cut into the rock itself, three superposed terraces to correspond to the three classic divisions of the Greek gymnasium. The lowest was used as a childrens' gymnasium; the second was reserved for the *epheboi* (youths), the highest for the adults. An ingenious system of water pipes fed the bathrooms adjoining the halls and grounds for exercise. These installations, at once comfortable and imposing, already foreshadow the great *thermae* of the Roman epoch.

By comparing the Acropolis of Pergamus with that of Athens we can see in what direction the taste of Greek architects had developed. They still preserve the feeling of the picturesque and that preference for steep sites from which the buildings rise as a statue from its pedestal. But there is less room for the unforeseen in their compositions, more symmetry of parts and more audacity in rehandling nature and forcing it into simple forms. Buildings formerly independent are brought together; colonnades become continuous around the temples. In the school of the Orientals the Greeks have learnt to see and to build on a larger scale. Taken individually, the buildings have lost that finest, that perfect balance of proportions, which was the characteristic of Greece in the golden age, but a new rivalry animates princes and artists to realise works of a size and an audacity unknown before them.

VII

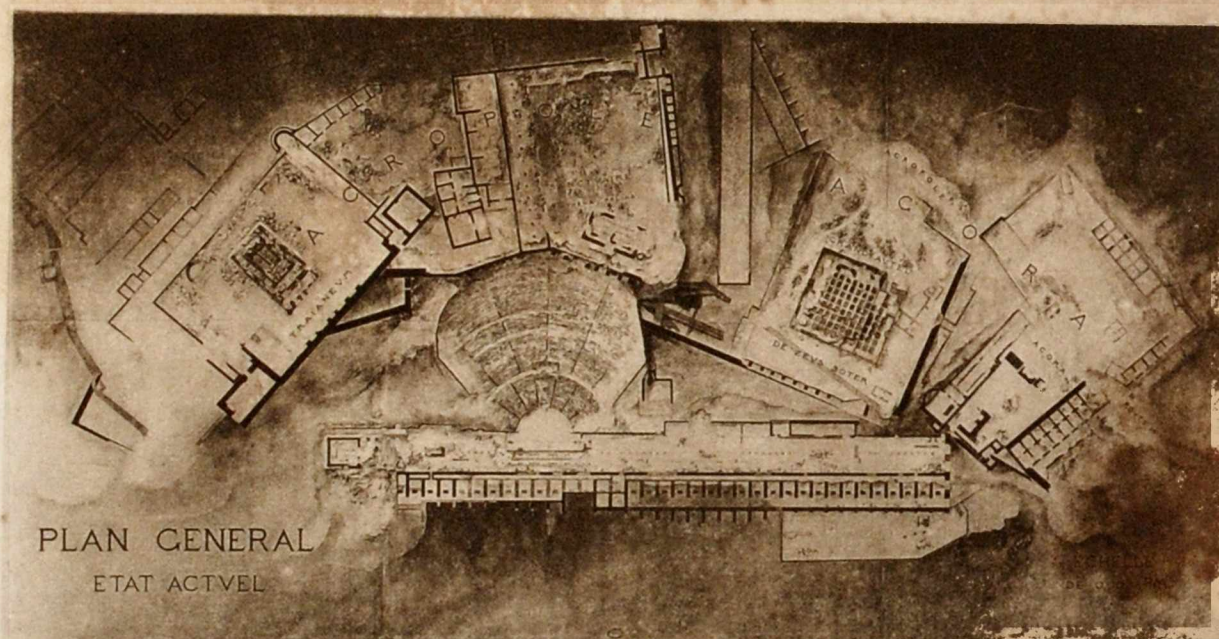
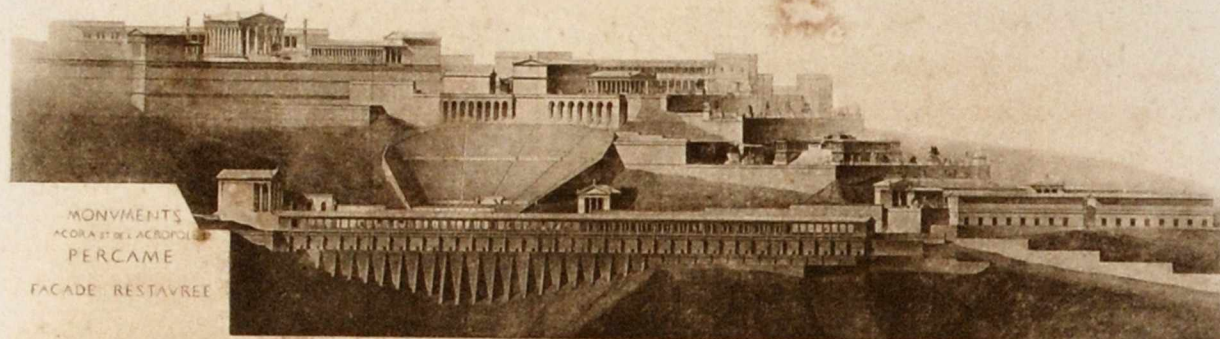
ARCHITECTURE OF IMPERIAL ROME

The Roman people at last realise the great projects conceived by Alexander and establish a universal monarchy. Rome, mistress and capital of the universe, attracts and centralises all the resources and activities of the empire. Her architecture corresponds to this character of world-centre and surpasses in power everything hitherto done. This imperial art, bred in Rome, spreads throughout the provinces and produces magnificent works in the chief cities of the empire. The last creations, like the Palace of Diocletian at Spalato, bear the signs of approaching decadence. The palace is no longer the dwelling of a universal sovereign, but the refuge of a threatened despot.

The advent of Rome to political power and then to the empire of the world, led to a new and incomparable period of monumental art. Roman

rose buildings of unprecedented luxury. Many great towns, like Alexandria, were founded at one stroke.

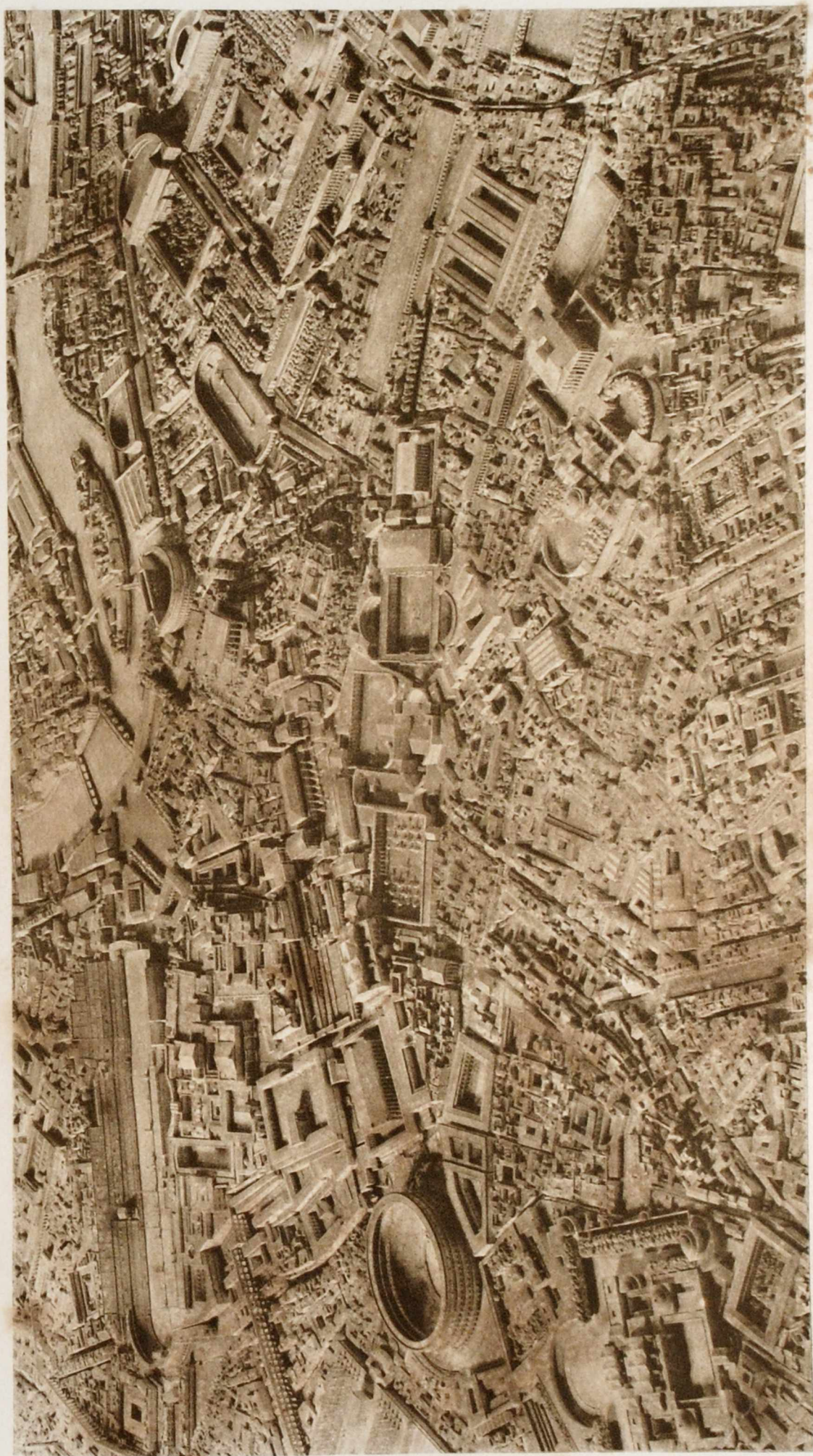
None of these new cities has left more interesting ruins than Pergamos. One must ascend this Acropolis to obtain some idea of the architectural groups executed at the orders of Alexander's successors. Of a poor fortress perched on a hill-top in the middle of a plain, the dynasty of the Attalides made a sumptuous capital, crowned with buildings. Two sanctuaries,



THE MONUMENTS OF THE ACROPOLE AT PERGAMOS

Restoration by M. E. Pontremoli.

of Athena and of Zeus, occupied the crest of the hill. That of Athena was surrounded by a large winding portico, which was prolonged in the rear by a library. In the enclosure consecrated to Zeus only one altar stood, but an immense altar, surmounted by a colonnade and all adorned with bas-reliefs of a pathetic and spirited character. A little lower, on a large level platform half way up the hill was the *Agora*, or market place. It was bordered by porticoes for the shelter of the sellers, with a temple of Dionysos



VUE GÉNÉRALE DE ROME À L'ÉPOQUE IMPÉRIALE

D'APRÈS LE MOULÉ EN RELIEF DE F. NGOT

architecture invented little, but profiting by the progress made by other nations, it set in its works the sign of a character peculiarly its own, and proportioned them to its requirements, increased beyond measure by conquest and wealth. Here we find, in the decline of the ancient world, the synthesis of aesthetic and technical inventions. The Roman artists were quick to profit by and make the best possible use of the inheritance left them by their predecessors. We shall find little novelty in their decorative style and



F. Hanfstaengl, Editor.

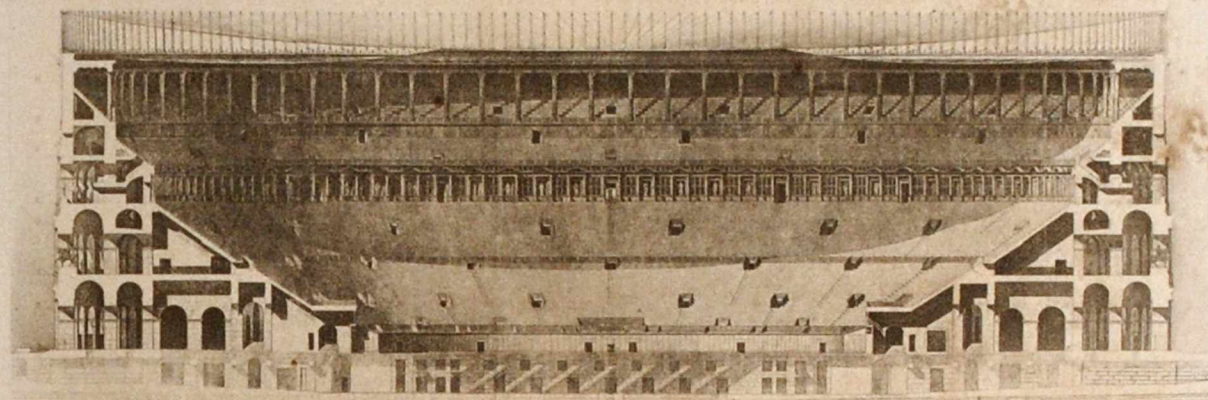
THE ROMAN FORUM RESTORED

From Buhlmann and von Wagner.

in the forms they adopted for their edifices, but out of the old elements they were able to compose monumental groups of incomparable grandeur.

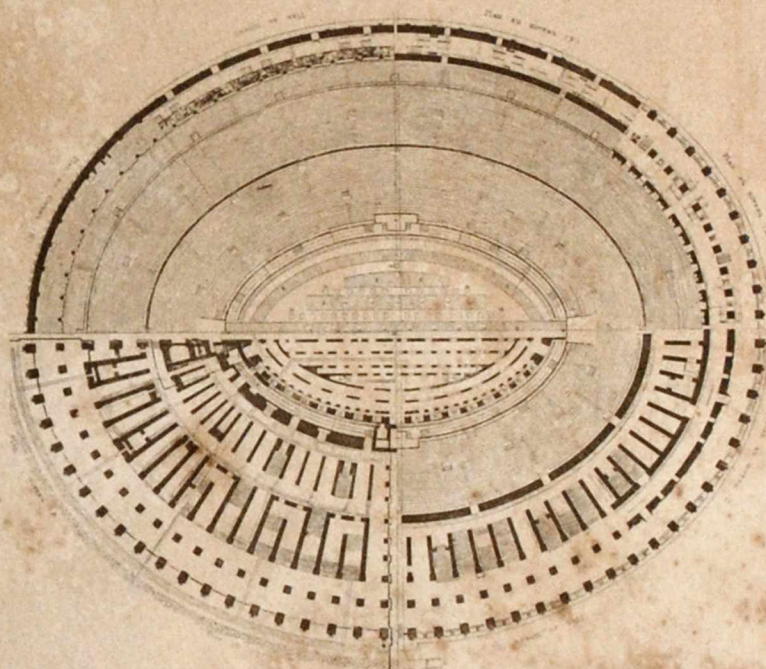
In the beginnings of Italian architecture, we find again the round hut with conical roof, as common to savages of old as of to-day. In the Roman Forum itself, in the most ancient tombs discovered under the ruins of the Republican epoch, terra-cotta chests filled with bones have been found imitating that form of building. Italy preserved the memory of that circular architecture longer than the other regions of the Mediterranean world. From it are derived the round monuments of classic Rome, such as the Pantheon of Agrippa, the temples of Vesta, the Mausoleums of Augustus and Hadrian. The Italians had no need themselves to perfect this primitive shelter in order to derive from it a monumental type. All their neighbours of the East had preceded them in the building art and provided them with models of perfected buildings, and methods of construction already tested.

only at Rome that it received monumental proportions. It served for many uses, but specially fulfilled the functions of a court of justice and an exchange. Each Italian city had its own, as every modern city has its townhall. As an architectural type, the basilica does not easily lend itself to a very pre-



ROME. — THE COLOSSEUM, SECTION THROUGH THE MAIN AXIS

Restoration by J.-L. Duc.



ROME. — THE COLOSSEUM, PLANS TAKEN AT DIFFERENT LEVELS

cise definition. It is often built on the oblong plan with narrow front that the Greek architects used for their temples. More often, perhaps, it has as façade the longer side, like the hypostyle halls of the Egyptian temples. Its most characteristic feature is its interior colonnade often supporting a gallery, and its system of lighting. It does not receive the light through windows in the walls, but from the lantern formed by the centre of the roof raised above the central aisle. In the West of the Forum two of the most celebrated basilicas were constructed : the Emilia and the Julia. The

They took from the Greeks the classic type of the temple, adopting it without essential modification, and the three great orders, the Doric, Ionic and Corinthian as well as the beautiful isodomon arrangement. From the Orientals they borrowed the cupola and the arcade, the type of the large hypostyle halls, lighted by a central opening in the roof, and a taste for the colossal, for vast groupings and for gigantic heapings up of stone. Eastern architecture was adapted to the requirements of princely life, and had created the palace. The

Greeks, especially occupied with public life, had mainly excelled in such works as porticoes, stadia, gymnasia. The art of Imperial Rome reconciled both tendencies, it has left more beautiful palaces than those of the ancient East and grander public buildings than those of Greece.



Phot. Anderson.

ROME. — TRAJAN'S COLUMN

THE ROMAN FORUM AND ITS NEIGHBOURHOOD

Here we find grouped together in a narrow space the most celebrated works of Roman architecture. Their still imposing ruins cover and surround the glorious valley which was the heart of the city and of the ancient world. A walk through this group of ruins shows the principal types of building familiar to the Roman architects.

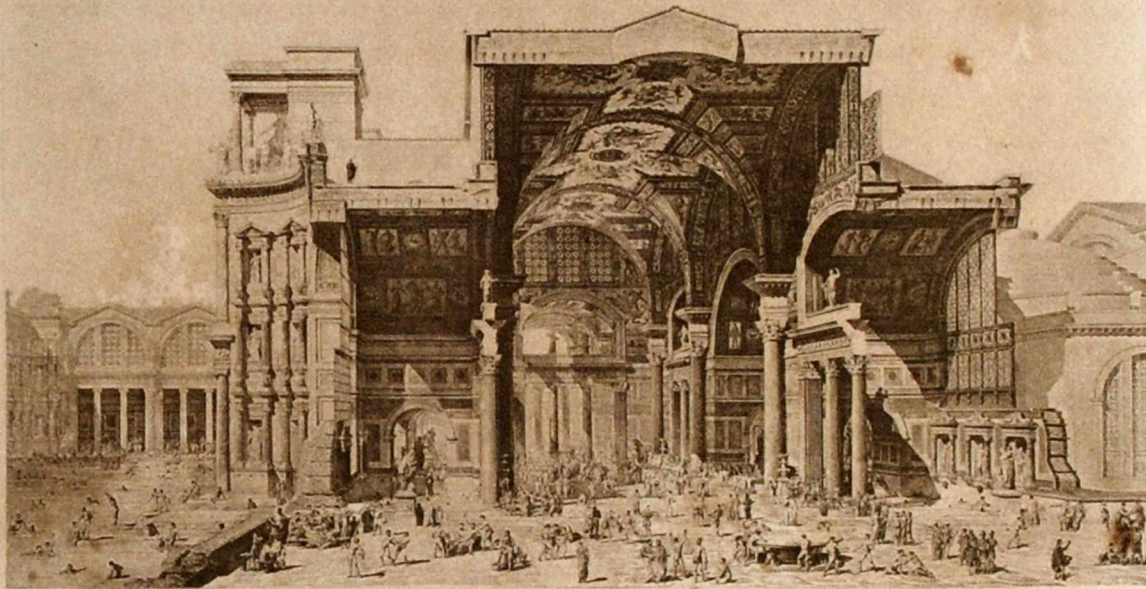
The Forum properly so called, forms a long oblong space overlooked by two hills : the Capitol and the Palatine. It was at once the

centre both of the political and the commercial life of the city. We find here the civil or religious buildings for the shelter of State assemblies and the large markets where men of business assembled. An oblong monument of Greek style lodged the Senate. Fortune, Castor and Pollux, Zeus, Vesta and other tutelary divinities of the city had their temples here. In the centre of the public square still stand the *rostra*. To shelter them from rain or sun the idlers and merchants had not only as in Greece small colonnades but immense halls called *basilicas*.

The basilica is perhaps not a creation of Roman architecture but it is

latter, built by Julius Caesar, still covers a large rectangle with its ruins and clearly shows the arrangement of the colonnades. It was really a covered public square.

In the first centuries of the Empire, the Forum of Republican Rome no longer sufficed for the crowd of merchants and idlers : it became necessary to extend it by means of other open spaces, that the architects set themselves to embellish as much as they could. After the construction of the Forum of Augustus, the Emperor Trajan traced the plan of a new square, and a basilica eclipsing all its predecessors. In front of it rose the celebrated column of Trajan still intact to-day, which supported the statue and covered the ashes of the Emperor. Its height has often been surpassed, but the



ROME. — PERSPECTIVE OF THE THERMÆ OF DIOCLETIAN

Restoration by M. E. Paulin.

perfect harmony of its proportions has never been equalled. In the interior a winding staircase leads to the top platform. On the pedestal are Roman eagles bearing oak garlands. Up the exterior of the shaft winds an army of two thousand and five hundred sculptured figures, the whole triumphal procession of the emperor, his soldiers, prisoners of war, horses, elephants and the spoils from his victorious campaigns. The forum of Trajan, including the basilica and the column, was the work of a Syrian architect, Apollodorus of Damascus, and, indeed, by its beautiful arrangement, it recalls the architectural groups of the most ancient Eastern cities. The art of East and West met in the heart of the world capital and cooperated in its decoration.

At the same time, on the heights overlooking the Forum rose edifices of quite another character. The capitol, the sacred hill, the acropolis of primitive Rome, was the seat of the sanctuary of Jupiter and of the tutelary

THERMES DES ROMAINS

Ces Monuments, produits de la magnificence Romaine, prirent leur nom du premier empereur qui leur fut dédié, parce qu'ils servaient de bains chauds. Dans la suite on y joignit les cinq exercices en usage dans les Gymnases des Grecs, c'est-à-dire la course, le disque, la pique, la lutte et le pugilat, on y trouva des Plantations de Platanes ou se promenaient les Savants, et où s'exerçaient les Athlètes, des Portiques, des Salles, des Salles pour les exercices, des Salles de conversation ou se rendaient les Philosophes pour enseigner leurs doctrines et les Anciens pour réciter leurs Ouvrages; on y trouva aussi des Bains froids, des Bains tièdes, des Bains chauds et toutes les autres pièces nécessaires aux Bains et aux exercices.

THERMES D'ANTONIN CARACALLA

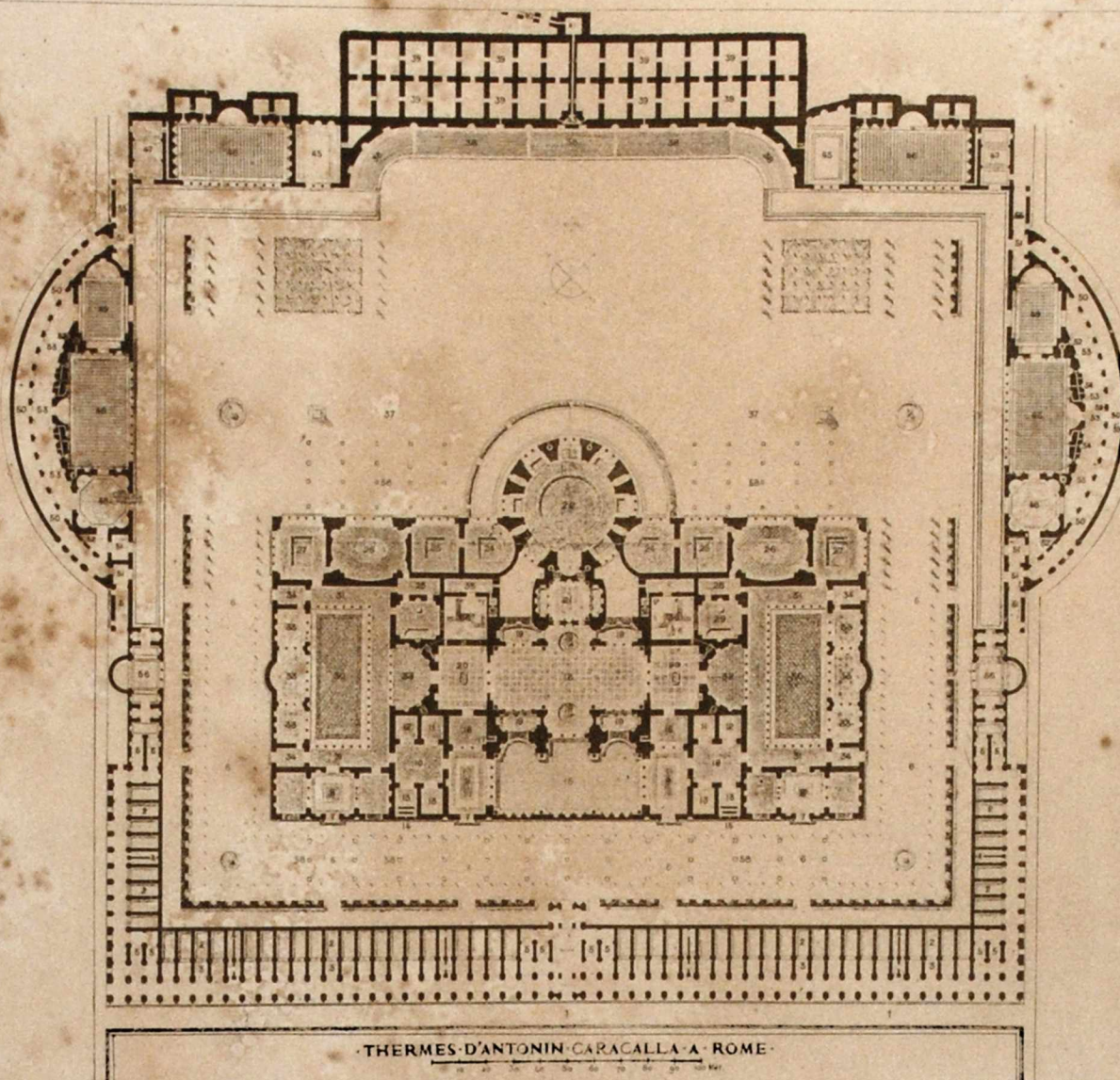
dont on voit encore les immenses Ruines entre la Voie Appienne et le mont Aventin, ils étaient à la même exposition que ceux de Titus et ceux de Néron. Ils leur ressemblaient beaucoup comme disposition; ils étaient les plus grands de Rome, et suivent le sentiment de Serlio, les mieux décorés et les plus parfaits dans toutes les parties de leur distribution.

Ils furent achevés la quatrième année du Règne de CARACALLA, c'est-à-dire la 217^e de l'ère chrétienne (EUSEBE), ces Thermes, selon LAMPRIDIUS, n'avaient pas de Portiques, ALEXANDRE SEVERUS les y a ajoutés dans la suite.

EXPLICATION DES CHIFFRES DU PLAN RESTAURÉ

1. Place entre les Thermes et la Voie Appienne, l'anneau ayant été relégué par Caracalla, prit alors le nom de Voie neuve (AURELIUS).
2. Salles de bain séparées à l'usage de ceux qui ne prenaient point part aux exercices (CHAMBERON), dans celle désignée par un astérisque, il y a encore de l'eau.
3. Antichambres dans lesquelles on se débarrassait.
4. Petites escaliers montant au second ordre des Bains; on trouve à mi-étage des restes de cuves enlucées supportées destinées à faire chauffer l'eau des Bains.
5. Grands escaliers par lesquels on arrivait au sol principal des Thermes et au second étage des Bains.
6. Plantations de Platanes et d'autres arbres (VITRUVIUS), elles sont ornées de fontaines jaillissantes pour rafraîchir l'air et de bancs pour la conversation.
7. Entrées principales.
8. Vestibule, les Bibliothèques étaient de chaque côté.
9. Vestibule de la Piscine, dans l'un est une statue d'Esculape, dans l'autre celle de la Déesse de la Santé (LUCIUS).
10. Antichambres, salles où l'on déposait ses vêtements entre les mains d'Esclaves nommés CARSIA, lesquels étaient chargés de lier les habits (PISCINE de Sery).
11. Escaliers, chaudières ou après s'être débarrassé, on s'agitait tout le corps d'une huile grossière avant de se baigner ou de commencer les exercices (PISCINE).
12. Conduites, pièces où l'on gardait la poudre dont les Luteurs se servaient pour s'essuyer et pour en couvrir l'admirable soin du seigneur plus aisément (VITRUVIUS).
13. Salles où l'on se lavait les habits.
14. Escaliers pour monter au second étage ou étaient logés les gens de service, et aux terrasses supérieures.
15. Piscine, dans l'origine, les Piscines étaient des Bassins destinés à contenir des Poissons, on a ensuite appelé Piscines tous les lieux où l'on pouvait aller à la nage et se baigner (CICERO), au devant des marches, pour descendre dans l'Eau, il y a des Barrières contre lesquelles s'appuyaient ceux qui voulaient voir les exercices de la natation (VITRUVIUS).
16. Salles destinées à la conversation (CHAMBERON).
17. Escaliers pour monter sur les terrasses supérieures, un de ces escaliers existe encore et sert pour monter sur les ruines.
18. Sévastre, Salle dans laquelle, à cause des différents cercles qu'elle contenait, on pouvait s'exercer à différentes sortes de jeux (PISCINE), suivant PLINE et LUCIUS elle recevait sa chaleur du soleil.
19. Terrasses, Bains d'eau tiède, au devant sont des Barrières contre lesquelles s'appuyaient les spectateurs (VITRUVIUS).
20. Salles pour les Spectateurs et les Luteurs (CHAMBERON), au-dessous étaient des Hippocaustes ou Fourneaux, dont l'effet était d'échauffer l'air de ces salles; on suppose que les deux grandes Ruines de Granite de la place Farnese, placées aux milieux et servaient pour ceux qui ne voulaient pas se baigner en continu dans les Bains tièdes du SÉVASTRE.
21. Terrasses, par lequel on passait pour aller au CALDAIRE, au-dessous était un Hippocauste, on y trouvait deux Bains chauds pour pouvoir y nager (PISCINE).

(du côté de l'entrée côté du PISCINE)



THERMES D'ANTONIN CARACALLA A ROME

THERMES DE CARACALLA
relevés et restauration de Blouet (1825)

22. CALDAIRE, Bain chaud ou Huve. Cette salle qui, suivant PLINE, sortait de l'alignement des autres étant, par sa disposition exposée au soleil une grande partie de la journée, elle en recevait beaucoup de chaleur, l'Hippocauste qui était au-dessous servait à l'échauffer encore davantage et à lui donner le degré de chaleur convenable à sa destination (VITRUVIUS), au milieu était le Bain commun entouré d'une barrière contre laquelle s'appuyaient les spectateurs (VITRUVIUS), les autres Bains étaient destinés à servir de bain chaud et servaient d'escalier, ne voulaient pas se baigner en commun; les gradins indiqués dans les mesures étaient destinés à prendre le Bain de vapeur.

23. Escaliers pour monter aux Terrasses et sur les Terrasses qui couvraient une grande partie de l'édifice.

Ces qui ne pouvaient pas servir par eux-mêmes, ils servaient par les degrés et arrivaient jusqu'à la température de l'air extérieur (LUCIUS), les autres servaient aussi de Bain pour ceux qui s'exerçaient dans le Xyste.

24. TERRASSES, Bains tièdes.

25. TERRASSES, Bains froids.

26. Salles découvertes pour les exercices.

27. FRIPIAIRE découverte à l'angle du Péristyle il devait y avoir un FRIPIAIRE (VITRUVIUS).

28. TERRASSES par lesquels on passait pour aller aux Caldaire.

29. CALDAIRE ou Huve, ils devaient être à l'angle du Péristyle; on plaça d'un côté le Dénique ou Fourneau par le moyen duquel la chaleur de l'Hippocauste qui était au-dessous se communiquait dans la salle et en augmentait la chaleur à volonté, de l'autre côté de la salle il y avait un Bain chaud (VITRUVIUS).

30. PÉRISTYLE.

31. PORTIQUES.

32. EXERCICES, où se trouvaient les Bancs pour les Philosophes, les Rhéteurs et les autres savants (VITRUVIUS).

33. EXERCICES, où il y avait des Bancs (VITRUVIUS), salles où s'exerçaient les apprentis en Gymnastique (CHAMBERON), suivant (PALLADIO) c'étaient des Ecoles pour l'instruction de la jeunesse.

34. Entrées latérales.

35. RÉSERVOIRS.

36. GONDS pour le service des Bains tièdes, il est impossible de bien se rendre compte de leur construction on y trouve, on suppose qu'elles servaient à faire chauffer l'eau pour la distribuer ensuite dans les Bains chauds et tièdes qui se trouvent à proximité.

37. Xyste, les pour les exercices, il était ouvert chez les Grecs et découvert chez les Romains, on y plantait des Platanes et d'autres arbres (VITRUVIUS).

38. GRADIN sur lequel un grand nombre de spectateurs se plaçaient pour voir les combats des Athlètes et les autres exercices du Xyste (VITRUVIUS).

39. RÉSERVOIR à deux étages.

40. AQUEDUC qui amenait aux Thermes une partie de l'eau du Tivoli.

41. CITRINE à deux étages dans laquelle débouchait l'eau de l'Aqueduc.

42. CANAL qui conduisait l'eau de la Citrine dans les Réservoirs.

43. BASSINS par lesquels l'eau entrait dans les Réservoirs.

44. ENTRÉES par lesquelles l'eau sortait des Réservoirs pour se distribuer ensuite dans les Thermes.

45. Salles découvertes à l'usage de ceux qui s'exerçaient dans le Xyste, on y trouve des Escaliers pour monter sur les Réservoirs.

46. PALÉSTRE où l'on enseignait la Gymnastique (CHAMBERON) d'après VITRUVIUS.

47. Salles à deux étages à l'usage de ceux qui avaient soin des Bains (CHAMBERON), dans les épaisseurs des murs sont les Escaliers pour monter à l'étage supérieur.

48. Salles pour la conversation (CHAMBERON).

49. ACADÉMIE (CHAMBERON).

50. PORTIQUES où les Luteurs des exercices se promenaient sans être exposés au bruit des Paléstre (CHAMBERON).

51. VESTIBULE.

52. ESCALIERS pour monter aux Terrasses supérieures.

53. FRIPIAIRE découverte.

54. ESCALIERS pour descendre dans les constructions souterraines.

55. ESCALIERS par lesquels on arrivait sur la partie supérieure du mont Aventin.

56. EXERCICES.

57. Partie de l'enceinte de Rome bâtie par SERVILIUS TULLIUS (NOM).

58. Ouvertures par lesquelles les constructions souterraines recevaient la lumière, elles étaient probablement fermées par des grilles de Bronze ou de Fer.

59. Fossiles, toutes par l'Académie de France, elles ont fait connaître les différents sols et les rochers indiqués dans ces parties.

the people of Rome thronged to the shadow of its halls. The bathers found there public *piscinae* or private bathrooms, baths of water, cold or warmed to any temperature. One of the public *piscinae* was sixty metres long. On leaving the bathrooms the bathers found every requirement for bodily exercise or mental refreshment. The whole group of buildings forms an immense rectangular mass 218 metres long by 112 broad. From the middle of one of the long façades there projected a semicircle around a large circular *piscina*. On all four sides, stretched gardens, race courses



COLUMNS OF THE TEMPLE OF THE SUN AT BAALBEK

GENERAL VIEW OF THE RUINS OF PALMYRA
From Wood.

for runners, walks planted with trees, all on a raised platform of the height of a first story surrounded by porticoes.

Neither the Colosseum nor the Circus Maximus give so complete an idea of the popular life of the city in the latter centuries of the empire. No monument brings home to us better the centralisation of the world's wealth in a single hand, for the benefit of a single town, which had become the centre of the world.

"Imperial Rome", said Taine, speaking of these ruins, "exploited the

gods of the city. Opposite it, the *Palatine* was reserved for the Imperial mansions. From the time of Augustus, the emperors built their palaces there and these ever more vast and sumptuous buildings ended by covering the whole hill. Built over with structures of every age, the *Palatine* was like a city in itself, recalling a little the immense residences of the Asiatic sovereigns of old.

A little further, beyond the circle of hills girdling the Forum, the Roman people had the largest circus and the most immense amphitheatre in the world : the *Circus Maximus* and the *Colosseum*. The *Colosseum*, built by Vespasian, is a work no less astonishing than the great Pyramids. It covers an area of 20000 square metres. Its immense outline belittles all the neighbouring edifices, in spite of the breaches made in it by time and the hand of man. On the exterior there are four stories of arcades and columns. Two subterranean floors served to lodge the herds of wild beasts that were let loose in the arena for the spectacle. The oval arena, 80 metres in length, is surrounded by tiers of seats rising over the lower arches, to a height of 50 metres. This prodigious hall could seat more than 90000 spectators.

The *Circus Maximus*, was not so lofty, but covered an even larger area. The whole valley between the Aventine and the Palatine had been enclosed and arranged for its construction. The Colosseum was specially intended for the gladiatorial fights with animals. In the long arena of the *Circus Maximus* the famous chariot races, for centuries the chief excitement of the Roman crowds were held.

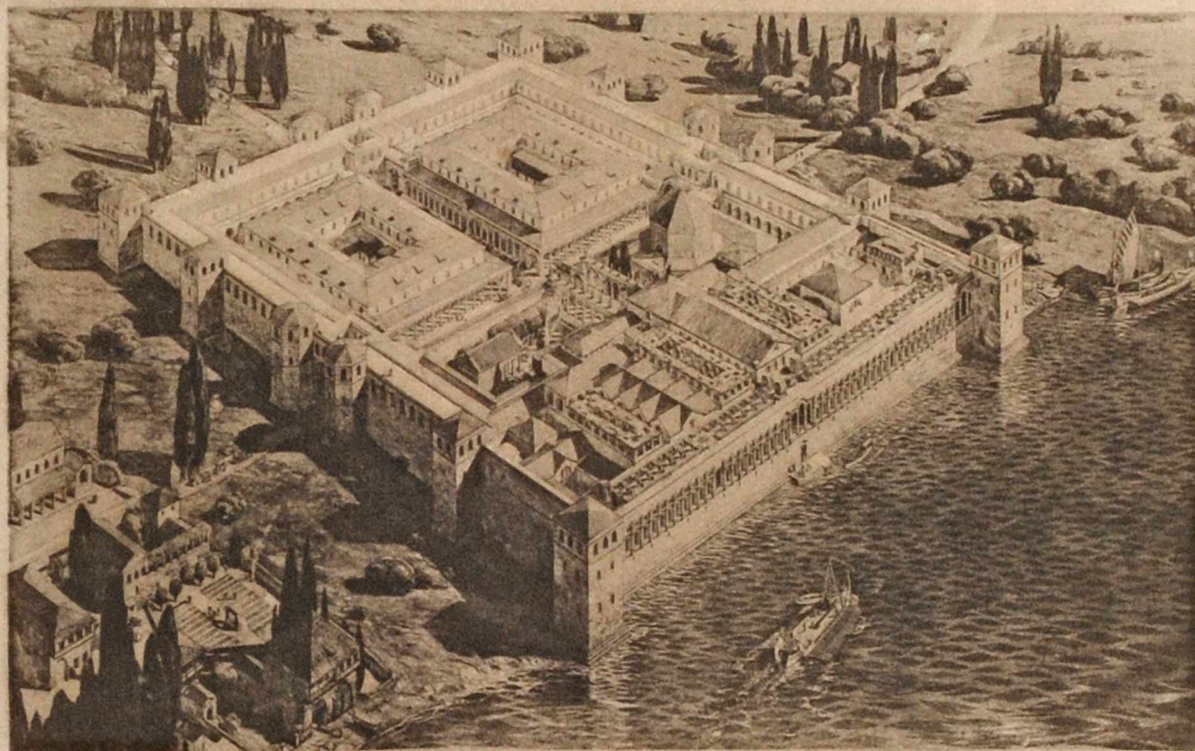
Thermae were still more indispensable to the people of the immense capital than circuses and amphitheatres. There were more than eight hundred in Rome, whither the crowd thronged from noon to evening. Agrippa was the first to open large bathing establishments for the people. After him all the emperors strove to surpass each other in the luxurious *Thermae* they presented to their city. From age to age these constructions assumed more and more importance and became more sumptuous. At the beginning of the Imperial period they only consisted of the requisite installation for bathing. Little by little they became places of amusement and promenade, a kind of clubs where the idle passed the heat of the day. Libraries and gardens were added to them, and they were filled with works of art until they became real museums.

Not far from the Forum, the great circus and the hill of the Imperial palaces, still rise to-day the *Thermae of Caracalla*, the most extensive ever possessed by the city of Rome. There is scarcely a ruin that leaves so profound an impression on the traveller. The immense vaulted roofs that covered the *piscinae* have almost all fallen, but the blocks that supported them still stand erect, thick and distorted like cliffs battered by the ocean. Marble coatings still adhering to the brick walls, and mosaics the grass has not covered, help us to an idea of the sumptuous aspect of the edifice when

posed entirely of three gigantic blocks, of which the biggest measures 19m. 52cm. These are the largest building stones ever quarried.

PALMYRA

Palmyra has been kept from destruction by the wilderness that surrounds it. This little island of ruins emerges from the desert on the road used by caravans from Damascus to Bagdad. The rising tide of sands has



BIRD'S EYE VIEW OF THE PALACE OF DIOCLETIAN AT SPALATO

Restoration by M. E. Hébrard.

not succeeded in burying it. To realise what were the great Romanised Oriental capitals in the early centuries of our era, Palmyra must be visited. The city's history was brief, and after a few years of incomparable brilliancy, it died a violent death leaving but fragments of colonnades, like a skeleton in the midst of the desert. First the capital of a republic tributary to Rome, then of a kingdom, it briefly enjoyed the height of its greatness under Queen Zenobia in the second century A. D.

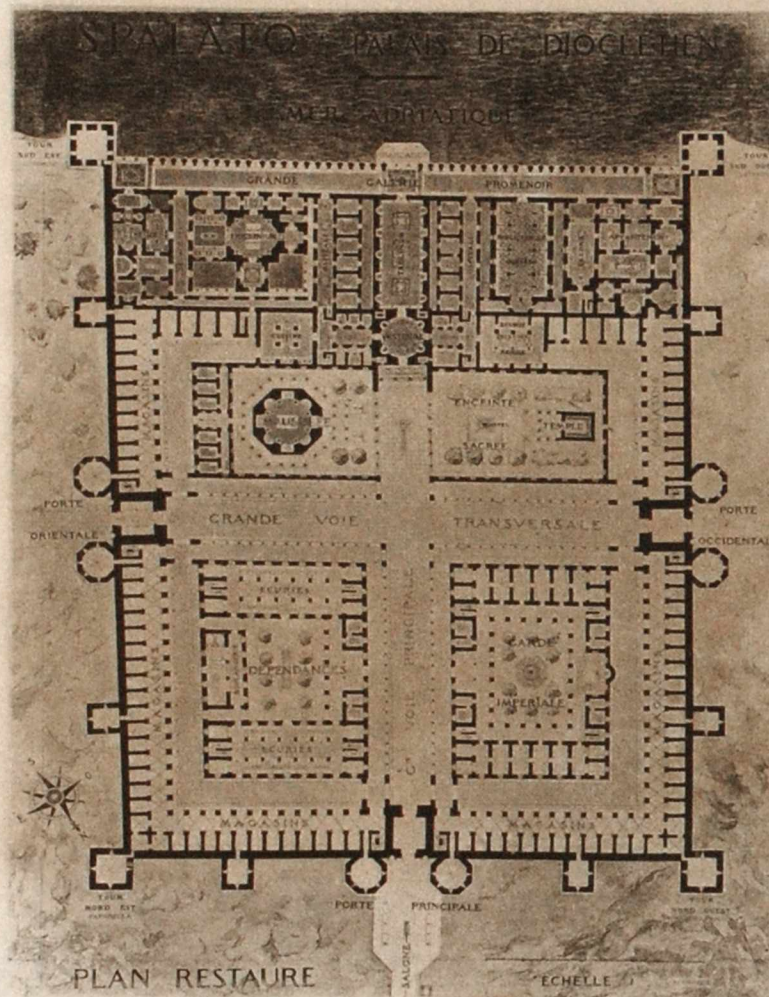
As in many towns, built or rebuilt at one stroke during the imperial epoch, the mass of streets and habitations was traversed from end to end by a monumental avenue entirely edged with porticoes. Another road cutting at right-angles through the centre seems to have been similarly decorated. Other less spacious streets were cut normally through the preceding two. This geometrical plan of a city, in the American style, is nothing other than the enlarged image of the Roman camp.

whole Mediterranean basin, Spain, Gaul and two thirds of Britain in behalf of a hundred thousand idlers; amused them at the Colosseum with the massacre of men and beasts, at the Great Circus with the contests of athletes and the chariots races; here they bathed, they came to talk, to look at the statues, listen to an orator, pass the warm hours of the day in the shade. Everything invented up to then in the way of comfort, everything pleasant

or beautiful, everything curious or magnificent to be found in the world, was for them. The Caesars nourished them, amused them, sought to please them and win their applause."

BAALBEK

Buildings of Greco-Roman style rivalling in immensity of proportion the most colossal of ancient Egypt, such are the temples of Baalbek. Western and Eastern architecture are represented equally in this stupendous work. From the East are derived the grandeur of the whole design, the immense symmetry of plan, the vastness of the material and



SPALATO. — PLAN OF THE PALACE OF DIOCLETIAN
Restoration by M. E. Hébrard.

of the motive; from the West the pure type of temple with pediment, the Corinthian columns with their capitals adorned with expanded and curled foliage. It is the Greek style in the hands of artists of another race, desirous of surpassing the Greeks in grandeur and sumptuousness. This work already foreshows how the moderns will imitate classic models. Sculptured decoration assumes new importance and definitively replaces polychromy. The stone remains bare, but it is the sun, the god of Baalbek that colours it, playing upon the ornaments the sculptor's chisel has made.

On a high platform, rising from the enclosure, stand the temples as on an immense pedestal above the level ground. The wall made of single blocks reaches in places the thickness of 4 metres. One layer is com-

CHAPTER II

THE MIDDLE AGES

THE political unity of the ancient world ends with the Roman domination. Several rival centres of thought and activity succeed the universal capital. In the several nations, which have become autonomous such as in Italy, at Constantinople, in France, architecture takes on different aspects. In this politically divided world, only one bond unites the peoples, that of religion. In spite of their continual dissensions, the Christian States form one great group which tends towards unity of thought and of culture. The Mohammedan and Buddhist peoples, with their own religion and art, constitute another world, the power of which is soon out-distanced. In Europe a new centralisation gradually takes place. This, however, is of a purely spiritual character. Rome, having become the religious capital of the Christian world, is also its artistic capital. Here centralises the progress made by artists of all races. The architecture inspired by Christianity here reaches its height, and consecrates the new agreement among nations by monumental creations unexampled in the past.

I

CHRISTIAN SOCIETY IN THE OCCIDENT LATIN BASILICAS

In Italy and in the Occident the first Pagan basilicas and temples are succeeded by the first Christian basilicas. A new form of social grouping calls into existence a new form of construction. The Christian temples, at first modest, even hidden underground as in the catacombs, gradually rise and increase in majesty and size as cities and nations join the new religion.

So important a fact as the spread and the triumph of Christianity, could not fail to open new roads to monumental art. The particular conditions of Christian worship necessitated an appropriate type of building,

DIOCLETIAN'S PALACE AT SPALATO

In 305 A. D. after reorganising the empire on new bases, and conducting in the Capitol the last triumph celebrated in the city of Rome, Diocletian abdicated, to pass his last years in Dalmatia, his native country. "He ended his life", says his biographer, "in honourable repose in a villa near Salona." This so-called villa is the largest of all the palaces built by the Roman Emperors. Indeed, rather than a palace it is an entire town, a fortified town. Its high enclosing wall, flanked with sixteen great towers, enclose princely apartments, Thermae, barracks for the whole imperial guard, warehouses and bakeries, two sacred enclosures, one containing a temple and its altar, the other a mausoleum, and large streets bordered with porticoes.

This curious monument belongs to the troubled period when in the decline of ancient art, a new civilisation was developing. Neither its style nor its arrangement recall precisely the buildings of classic Rome. In certain features we recognise the growing influence of Eastern architecture and we have also a foretaste of the Middle Ages. It was the time when the flood of the barbarian invasions began to beat uninterruptedly against the dikes of the Empire. Princely residences, like those of the Oriental monarchs of old, now hid themselves behind high walls.

Diocletian chose the site for his palace on the shores of the Adriatic, at the place now named Spalato. The works were about finished at the date of his abdication and retirement into Dalmatia. At his death, he was buried in the mausoleum which he had built in the middle of his residence, and which was the heart of the building. Towards the beginning of the 7th century, the neighbouring city of Salona was sacked by the Avars and later by the Croats. In fear of new attacks, those of its inhabitants who had not emigrated sought a refuge in the palace of Spalato. The strong walls that had withstood the barbarians became the ramparts of a veritable city. In the gradually transformed imperial dwelling, huts were built, and then real houses; Diocletian's mausoleum became a cathedral. Some parts of the edifice were not rebuilt but simply rearranged by the new inhabitants. A time came at last when the city, passing the wall within which it had entrenched itself, overflowed on every side. To-day the palace is both filled and surrounded with modern constructions, but the general arrangement is still rudely seen, and the porticoes which are intact give an imposing idea of its original appearance.

Constantine's, destroyed by fire in 1823 and shortly after rebuilt upon the original plan. To support the five naves by a forest of columns, Constantine took the marble, porphyry, and granite shafts from under the architraves of the Mausoleum of Hadrian. To cover the great nave, for which the chief beams had to traverse the enormous width of 29 metres, the wood from Trajan's basilica was utilised.



BASILICA OF SAN PAOLO FUORI LE MURA. ROME.

Allinari, phot.

Let us note two novelties in the accessory arrangements of the Latin church, which will later give their special character to Christian churches : these are the transepts and the steeple. The transept is that transversal portion which cuts through the body of the basilica slightly in front of the apse. In some pagan constructions this form is vaguely indicated, but it is not sharply defined till the time of Constantine. Later it was noticed that it gave the ground plan of the church the shape of a cross. Christian symbolism attached a significance to its presence which it had not at first had, and it became one of the essential features of the building.

Neither is the steeple entirely new to us. In this high tower, indicating from afar a sacred place, we recognise the descendant of the vertical sign, met with amongst primitive peoples and, as it were, the brother to the Brittany menhir and Egyptian obelisk. The Greeks and after them the Romans, had omitted high monuments from their sanctuaries ; but with the

of which pagan society had not yet felt the need. To celebrate the liturgy the first Christian communities gathered in private houses put at their disposal by the richest among the faithful. Whether special buildings for Christian worship existed during the first, perhaps even during the first two centuries of our era, remains problematical. But in the third century, in spite of persecutions, the building of real churches was almost everywhere begun. Finally, in the reign of Constantine, Christianity, became the official creed, and far more vast buildings were consecrated to it than those in which the pagan rites had hitherto been celebrated. In a few years hundreds of churches arose in the imperial cities of the East and West. The most important of these are called basilicas.

Between the heathen temple and the Christian basilica there is no precise resemblance, except that both have a sacred character and are venerated as the house of God. The Greco-Roman temple, is but a narrow dwelling to which only a few of the faithful are admitted to contemplate the worshipped statue. The church is a meeting-hall, made as large as possible, and for the whole body of the faithful who assist at the liturgy. It is not only the house of Christ, but the house of the community.

When, under Constantine, at the period of the church triumphant, Roman architects were given the order to transform or erect structures for the new official cult, they did not use the narrow sanctuaries of the fallen gods as models. They copied the civil basilicas, those vast constructions which near public squares sheltered the crowd of idlers, litigants and merchants. From these structures the Christian churches received not only the name, but the general arrangement. This monumental type with an apse and a triple colonnade, was already familiar to Roman architects long before the time of the first churches. It was easily adapted to the conditions of the new worship. The two naves on the sides were reserved for the faithful, one being occupied by men, the other by women; in the centre gathered the catechumens and clergy. The apse and the space in front of it, usually raised a few steps, were consecrated to divine service. The altar, the bishop's throne, the circular bench where the priests sat, were there. The façade was frequently decorated by a portico reaching over the whole width. In front spread an *atrium*, or square court, bordered on the inside by a covered gallery. This plan was not created during the Christian epoch, for almost the same idea was carried out in civil basilicas; but that which is new, and marks a date in the history of monumental art, is the amplitude given it by the Christians.

Modern Rome still possesses several churches that date back to the time of Constantine and which still keep many ancient features, in spite of inevitable alterations. Such are : Sant' Agnese Fuori le Mura, San Pietro in Vincoli, Santa Prassede, Santa Maria Maggiore, San Clemente. The most sumptuous was certainly the basilica of S. Paolo Fuori le Mura, a work of

its structure, its shape becomes that of a cupola upon pendentives, a thing almost unknown to Roman builders of the Empire.

From the use of cupolas results the form and the novel appearance of Byzantine buildings. The whole plan of the basilica is conceived in relation to the dome which is to crown the central place. This circular covering of considerable weight presses down upon the whole supporting edifice, which in turn must be solidly buttressed on all sides. Hence the necessity of surrounding the central hall either by four niches which counterbalance the pressure of the dome, or else by four smaller halls likewise covered with little domes. Thus, instead of an oblong form as in Western edifices, the need of a perfectly symmetrical round or square plan is imposed from the first. All the organic parts of a monument are grouped and composed about a central point. On the outside the cupola can rise to a very considerable height, and, like the top of a pyramid, dominate surrounding walls and neighbouring structures. Vast interior spaces can easily be covered without additional support. No more is the forest of columns seen as in pagan basilicas and Egyptian hypostyles, but an immense, empty hall of great height is covered by a veritable sky of stone. The plan upon paper is seductively symmetrical. Everything converges towards the dome; all the parts press against the central mass, shoulder and uphold it.

The decoration of the Byzantine basilica, of extreme richness, largely contributes to the effects obtained by the interior arrangements. Walls of masonry in the Orient are never left bare. The most usual method of ornamentation is that of hanging carpets. In Byzantine architecture, the interior decorations recall such hangings. They might be thought tapestries woven in gold and precious stones fastened to the walls. Everything must be inlaid, painted or covered with mosaics, of which the tones vibrate as richly as those of the most precious materials. Where marbles can be put, coloured marble is prodigally used; upon arches or any vaulted surface where such decoration is unpractical, mosaics are resorted to and their effect surpasses all else in brilliancy. Byzantine mosaic, made of cubes of glass, is wonderfully adapted to concave surfaces; better than any blocks of stone or stucco, it follows a curve and avoids the sharp light which elsewhere would mirror from it. Splendid shimmering colours covering the whole interior of an edifice, necessitate a modification in sculptured ornaments. Gradually, the reliefs upon capitals and bases are flattened and the sculptor limits himself to merely chiselling the stone without deeply undercutting it. Sharply detached foliage, like the Corinthian acanthus, would only lose in modelling and in the modulations of light and shade beside glimmering enamels. This infinitely complicated, subdivided and minute decoration nevertheless produces an effect of perfect unity and repose. All the tones reflecting upon one another, harmonise into a tranquil, warmly coloured light, which pleasing to the eye, in no way distracts from the great masses.

coming of Christianity we shall see them reappear. Beside the chapel where the faithful gather, a round or square tower will rise, modestly at first, but gradually higher towards heaven. In Strasburg it will reach 142 metres. Finally at Cologne it will exceed the height of the great pyramid.

II

THE BYZANTINE CHURCH WITH CUPOLA

This is another form of Christian temple of which the power and richness correspond with those of the Orient. Constantinople, for a moment heiress of Rome and the home of art and of culture, raises the most glorious monument of ancient Christian architecture: St Sophia.

While Christian architecture in the Occident remained faithful to the methods of construction usual in the classical epoch, a new style and technique totally transformed the appearance of religious edifices in the East. With the height of the Byzantine Empire corresponded one of the richest artistic flowerings that history has had to record. First appearing in Asia Minor, in Armenia and in Syria, it blossomed fully at the time of Justinian in Constantinople.

By its situation Constantinople was destined to be a bond of union between two worlds, the Orient and the Occident. The events which were bringing on the ruin of Rome and the early decadence of Christian art in Italy passed without reaching it. In the face of Europe, fallen back almost into barbarism, the Empire of Byzantium maintained its prestige and culture. Architecture in the Oriental provinces of the ancient Roman Empire had kept its own character, and had never docilely complied with the formulas of official imperial art. The Byzantines received a double heritage from Rome and the Levant. But the elements of a style and technique to which their name became attached were derived chiefly from the Orient.

The Byzantine church answers no other purpose than does the Latin basilica; it is always both the house of God and the vast meeting-hall where gathers a religious community. The programme does not vary, yet the difficulties presented thereby are resolved in an entirely different way. The technical innovation consists in the use of a very much more perfect system of vaulted construction than that of the preceding age. The Byzantine arch is a light cap that does not require the same enormous mass of materials and expense of labour necessary to the building of the Roman arch. The latter is moulded and forms but a single mass of rubble. The Byzantine arch, on the other hand, is actually built. No less perfected than

sand men, working together, built the brick walls, while in the Golden Horn ships unloaded columns of marble and porphyry brought from Pergamos, Ephesus and Miletus. Justinian lived long enough to see his finished work and, it is said, exclaimed : " Solomon, I have outdone thee. " Let us remember this word, for it betrays an ambition seldom met with in modern times : that of bequeathing a structure unequalled upon earth. Several princes of antiquity desired this glory ; and architecture owes to them its greatest masterpieces. That in these latter centuries this art has not continued to outdo itself, is because such men perhaps have been lacking.

III

THE ROMANESQUE AND GOTHIC CATHEDRAL

New aspect of the Christian edifice in Occidental Europe. The development of high construction. Architects endeavour to raise ever higher the top of the building in which the religious ideal of Christianity is expressed.

We have already called attention to the tendency of humanity from the earliest times to build, straight towards heaven, some slender signal such as a column or tower. In France in the Middle Ages this tendency is more pronounced than in any other country in any period. The masterpiece is the cathedral, the immense, high church that dominates the whole city. As a monumental conception neither the Romanesque nor the Gothic cathedral presents any thing new. It is an organism that took shape in the first centuries of the Christian worship, and its essential features could not be deeply modified.

During a first period, roughly comprising most of the 11th and 12th centuries, the prevailing style was the one which it has been agreed to call the *Romanesque*, directly inspired by the religious monuments erected in the Orient, or in the Byzantine Empire, during the first centuries of the Christian era. We are familiar with its principal forms : the round arch springing from columns or piers, and a dome resting on pendentives. The plastic decoration during the first period was of extreme simplicity, being confined mostly to light and minutely chiselled works on the arches and columns, in the manner of the Byzantines.

In the 12th century, Gothic architecture gained a sudden impetus at the heart of the kingdom, in the cities of Ile de France, and quickly absorbed the Romanesque by the introduction of technical and decorative innovations of considerable importance. We can speak but briefly of Gothic decoration. The crowds of figures that ornament the walls and arches of

When seeking to characterise Byzantine architectural art, the word *unity* continually recurs. In the construction of the building all efforts are linked and convergent; in the decoration everything blends into a single colour, rich with a thousand harmonious tones.

Several centuries of effort are required to establish, perfect and finally to achieve this type of domed basilica with all possible amplitude. The first

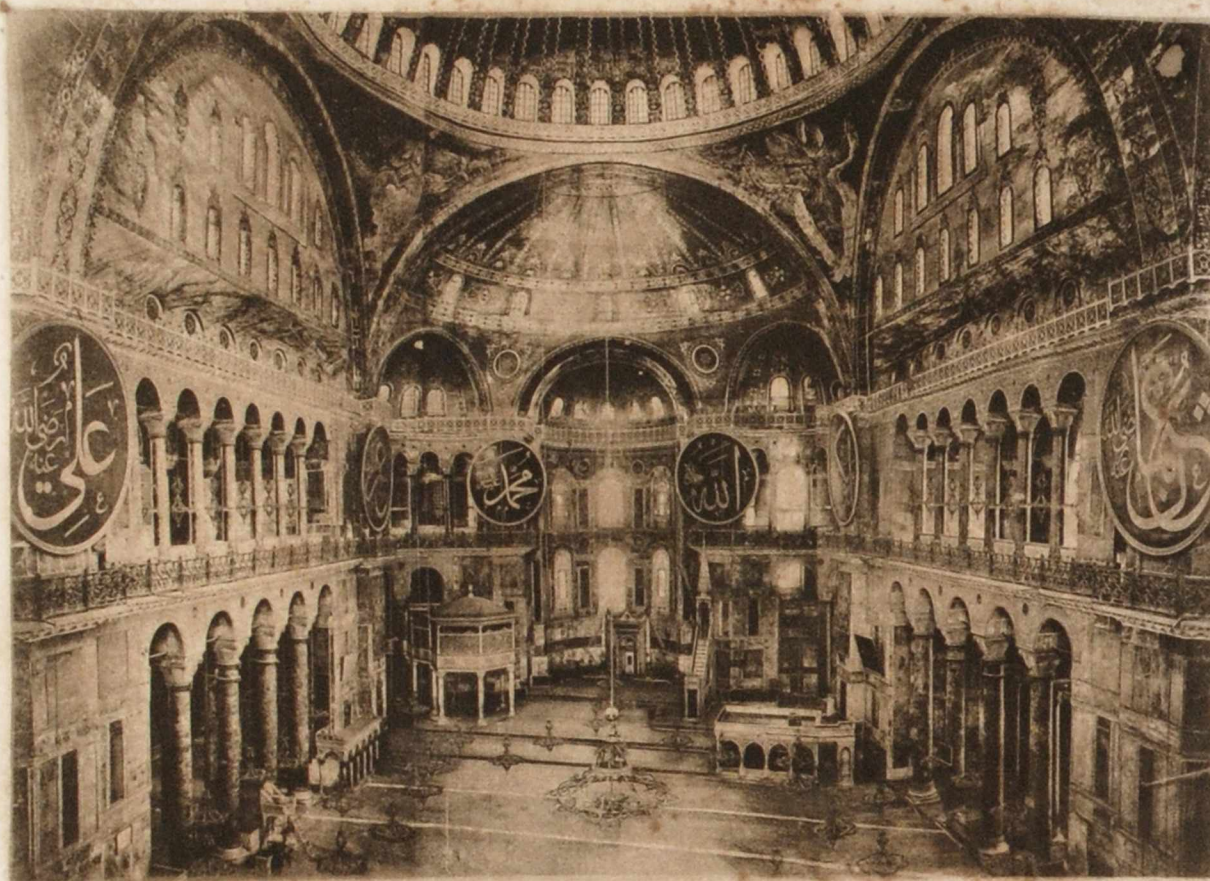


Photo Sebah.

CONSTANTINOPLE. — INTERIOR OF SAINT SOPHIA'S

attempts are modest churches, with a central round or octagonal sanctuary, like the one at Antioch described by Eusebius. The uncontested masterpiece and the culmination in this evolution is St Sophia's at Constantinople. Without being immense, this edifice produces an effect of immensity. Standing beneath the cupola, it hardly seems possible that the greatest dimension is less than a hundred metres. The enormous reach of the dome only is prodigious, and this gives power to the whole.

This basilica, though it is hardly credible, was entirely built in a few months to replace an earlier church, constructed in the 4th century under Constantine, and reduced to ashes during the famous circus riot. Justinian had nurtured the ambition to dedicate the most sumptuous building upon earth to the true God. For the plan, he called upon the two most famous architects of his time, Anthenius of Tralles and Isidore of Miletus. Pagan temples throughout the provinces of the Empire were stripped. Six thou-

of Paris (1163). The height of the nave of the cathedral at Amiens is exactly three times its width. This fact alone is sufficient to show the extent of the revolution accomplished in monumental aesthetics by the creators of the Gothic style.

THE TOWER AND THE SPIRE

All churches, however great the height of their naves, were furthermore ornamented with one or more towers. Let us note here how little the word *belfry*, so frequently applied to church steeples, corresponds to the character and use of these Christian towers. Bells do not require such high shelter or such strong support crowned with bold spires. This misnamed tower answered a more general need : that of domination and of calling attention from afar to a sacred spot by means of a lofty signal.

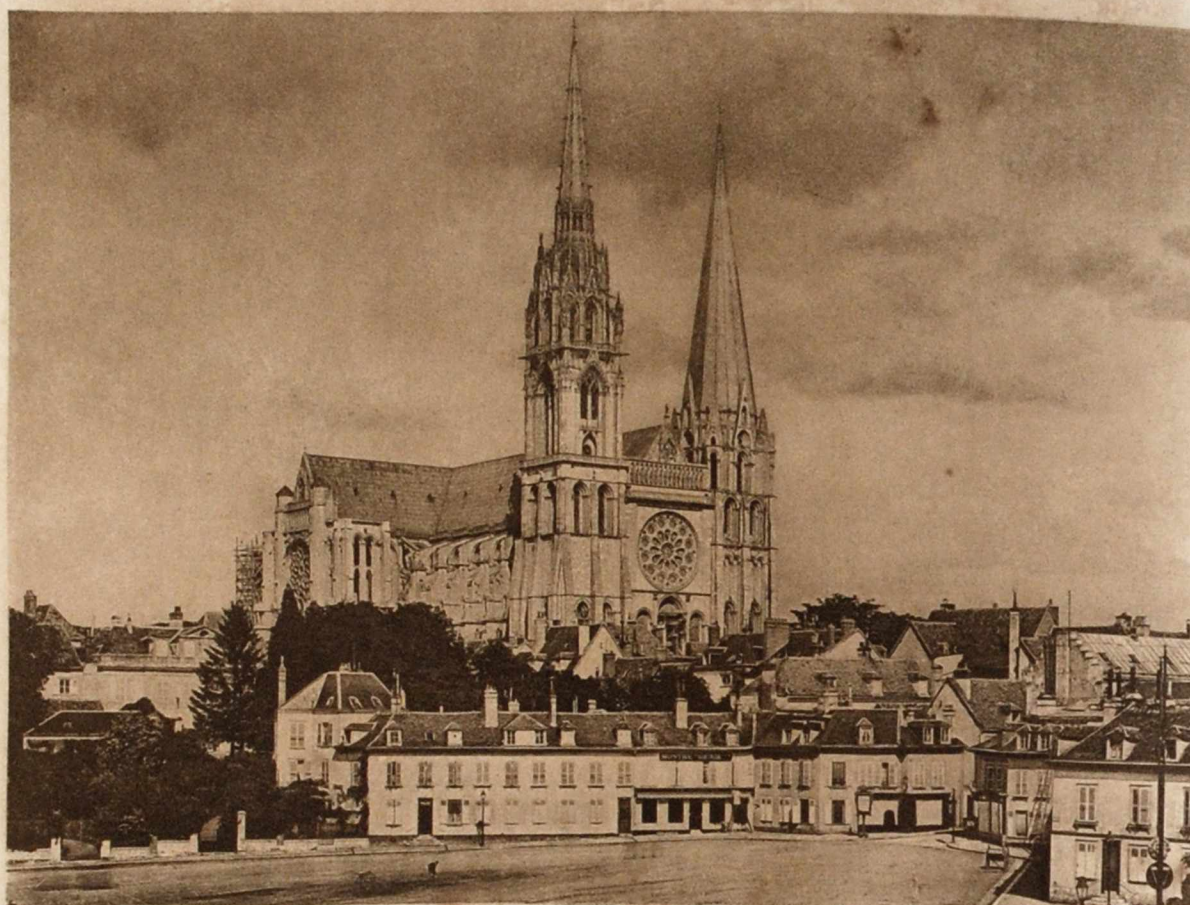
From the 11th century these belfries were multiplied throughout the Christian countries of the Occident also for military reasons. The church tower, commanding the city, village or abbey, became a useful point from which to survey the adjacent country. From its windows the enemy was seen and signals given for protection. Placed at the front of the church, in its very axis, as at Poissy, Tournus and St Savin, the towers command the door of the church and dominate its façade with their imposing mass.

There soon was a rivalry between architects and cities as to who should create and erect the highest tower. Every parish desired one. To balance the donjon of the lord, the chapter of the cathedral erected steeples, visible signs of a rival power. The early conception of a campanile standing apart from the church only survived in Southern countries, notably in Italy and in Southern France. There, if the tower was not completely detached from the church, it merely rested against its walls without forming an integral part of the edifice. With the exception of not being a monolith, it was in fact the equivalent of the Egyptian obelisk.

But Romanesque architecture found in ancient Oriental art the model for a different arrangement of the tower. Syrian architects, as early as the time of the old Hittite empire, often placed twin towers on either side of their monumental doors. The temple at Jerusalem, the national monument of the Hebrew people, showed us a striking illustration of this motive. Christian Syria adopted the two-towered style of façade for its churches. An example of this is the celebrated basilica at Tourmanim, which by many characteristics announces our Romanesque architecture. After various trials of all possible arrangements, this type of double frontal belfry on the whole prevailed. Nevertheless, the raising of other spires was not abandoned, especially at the point where the transepts and the great nave cross. As the obelisks in Egypt, the belfries were multiplied.

It is with these Gothic cathedral spires that stone construction for a time attained its record height. The main towers of the cathedral at Rheims,

these cathedrals are well known and form a sculptured poem as legible to the eyes of the faithful as an immense stone Bible. In the cathedral at Chartres, in the interior alone, are 1814 figures, to say nothing of gargoyles, mascarons and corbels. At least as many figures shine through the multi-coloured glass of the windows.



THE CATHEDRAL AT CHARTRES

Photo N. D.

From a technical point of view and for the proper history of monumental styles, two new features should be noted : the introduction of the pointed arch and the rapid evolution of light and lofty construction. The introduction of the flying-buttress, a hitherto unknown artifice for strengthening the walls of a structure, allowed builders to carry their vaultings to an astonishing height and at the same time to pierce the supporting walls with a great number of very high windows. This had a double effect : the exterior of the church acquired a majestic lightness, and like a giant cliff rose out of the midst of low lying dwellings. In the interior, the colonnades heightened by the veinings of the ogival vaultings, resemble an immense forest flooded with light. It is the birth of fresh aesthetics based on new technical foundations.

Some of the earliest masterpieces of this architecture are the cathedrals of Laon (1114-1154), Noyon and St. Denis (1130-39) and that of Notre-Dame

height of 142 metres; it is but a few feet lower than the great pyramid. Next in height come the steeples of the cathedrals at Amiens, Freiburg, Antwerp, and Chartres, which are from ten to twenty metres lower. The record for lofty construction, so long held by the Egyptians, was finally



Photo L. L.

THE CATHEDRAL AT STRASBURG

wrested from them by a building of Gothic style, and this only in the 19th century. The cathedral at Cologne, begun in 1268, interrupted in 1437, and completed only about twenty years ago, carried its highest spire to 166 metres above the ground. After the Washington Monument, it is the loftiest stone construction in the world.

although they were never given the sharp spires that should have crowned them, already rose to 83 metres above the ground.

This quest — or craze — for height is best shown in the cathedral of Strasburg. This façade is a masterpiece of illogical genius. It greatly recalls that of Notre Dame of Paris in its proportions and ordonnance, with the

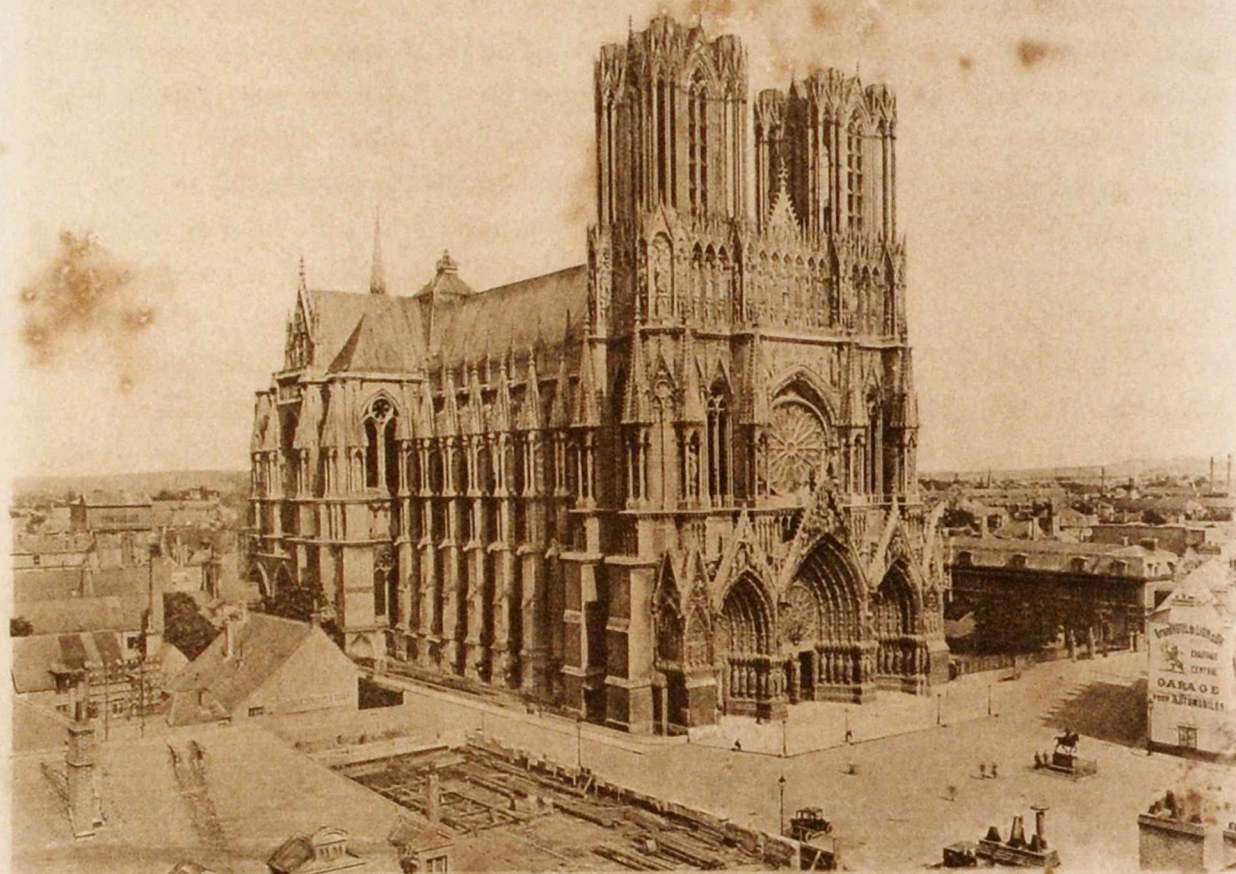


Photo N. D.

THE CATHEDRAL AT RHEIMS

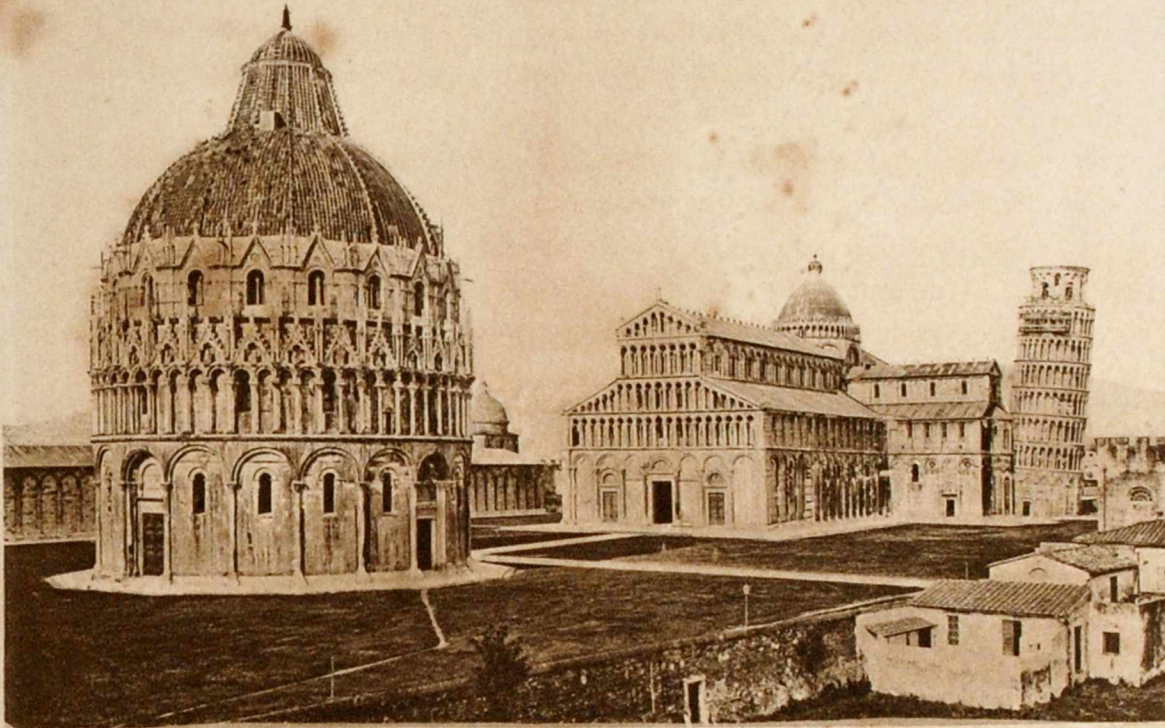
exception of the division of the towers at the third story. From a horizontal terrace rises a monumental steeple. This, placed to the left of the façade, and with nothing to balance it upon the right, is a miracle of boldness and lightness, and absolutely unique in the history of stone construction. It is open-worked to the very top and flanked with four beautifully embroidered turrets, in which wind four spiral staircases. The spire, an eight-sided pyramid, is also nothing but a piece of stone lace-work, in which eight additional stairs twist upward in the midst of open-work sheathes. The completion of this tower was a world event. For a considerable period its conception and construction established a wide reputation for the architects and masons of Strasburg. These were called to Germany, Vienna, Cologne and Freiburg. But none of their later works surpassed their first effort in lightness and boldness.

The spire of the cathedral at Strasburg darts its cross to the record

PISA

This fine frenzy for building seems to have begun at Pisa. The founding of the cathedral marks the awakening of artistic life in Italy.

"The Pisans", said the old historian Vasari, "were then at the apex of their grandeur and progress, lords of Sardinia, Corsica and the Island of



Allinari, phot.

THE MONUMENTAL GROUP AT PISA

Elba, and their city, full of great and powerful citizens, brought trophies and innumerable spoils from the most distant places." More or less with the fragments of antiquity they rebuilt their city. A desire for splendour and for art awoke in them at contact with powerful or fallen foreign peoples. In honour of the Virgin, who gave them victory over the Saracens, of Sardinia and of Sicily, they began in 1083 to build the Dome, first element of a magnificent group which they were able to complete before tasting defeat.

"There are two Pisas", says Taine, "in the one, the people since its decadence have been bored and have vegetated; this is the whole city, less a small quarter; the other is this corner, a marble sepulchre in which the Dome, the Baptistery, the Leaning Tower, and the Cemetery rest silently, like beautiful dead creatures. The real Pisa is here; and in these relics of a spent life a world is seen. A Renaissance before the Renaissance, a second, almost an antique growth of antique civilisation, a precocious and complete sentiment for beauty, spring after ten centuries of snow, such are

IV

ITALIAN TOWNS AT THE END OF THE MIDDLE AGES

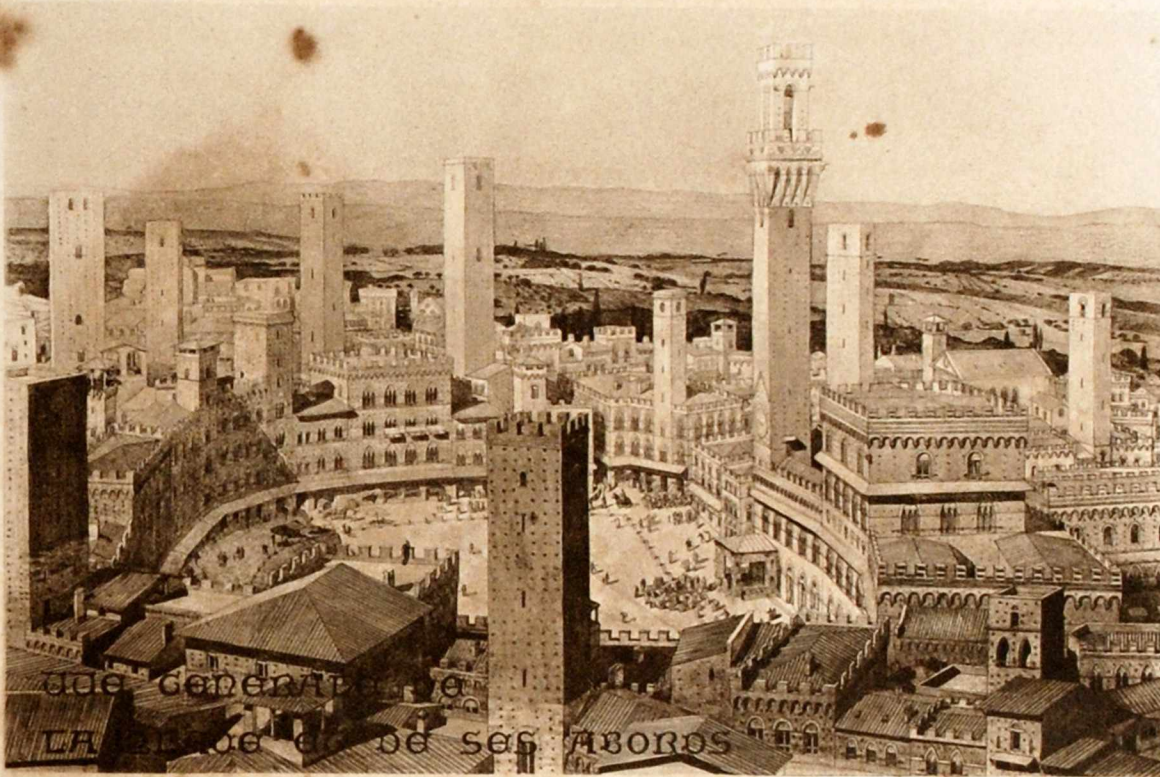
These little States, that too often waste their efforts upon futile rivalries, nevertheless have the highest artistic ambitions. Pisa, Sienna, Florence and Venice become marvels of art. But their monumental works are far above their political or moral importance in the world, and their dissensions render their prosperity ephemeral. In Italy and Europe, always divided, Rome only, as religious capital, is able to centralise activities and talents.

Not only are the monuments and architectural groups which adorn almost every city of mediaeval Italy worthy of admiration, but also the artistic passion and the effort of will which created them. Every Italian town, made prosperous by war or commerce, took pride in its own transformation. The smallest had the vastest aspirations. Each one hoped, by its own efforts, to achieve unprecedented masterpieces. In spite of the uncertainty of the morrow, in the midst of daily civil discord, each one desired to leave some magnificent testimony of its power and, to succeed in this, demanded that architects spare neither pains nor cost.

The official documents in which the Italian States, miniature republics, proclaimed their intentions and spoke of the structures they meant to build, should be perused. They breathe the most candid pride, but also a passionate love of art and of country. The public decree given in 1294 by the Signoria of Florence to provide for the restoration of the cathedral, deserves to be textually quoted : " As it becomes the sovereign prudence of a people of high origin to proceed in business in such manner that its wisdom no less than the magnanimity of its conduct be attested by works outwardly achieved, Arnolfo, master-architect of our community, is ordered to make models or drawings of the utmost prodigality and magnificence for the restoration of Santa Maria Reparata, that the industry and might of men may never again invent, or never again be able to undertake anything whatsoever more vast or more beautiful; according to the deliberations and councils of our wisest citizens in public meetings and in secret committees, it is now made known that no public works shall be begun unless with the intention of making them correspond to the great soul made up of the souls of all the citizens united in one will. "

Such ambitions, united to a rare sentiment for art, produced throughout Italy, within the space of a few centuries, a harvest of masterpieces unequalled in history.

with battlemented towers rising like minarets above the roofs, border these streets. The whole amphitheatre of the Piazza is edged with such palace-fortresses. Opposite these lies the Palazzo Pubblico, the largest and most severe of all, "magnificent City Hall, good for resisting attack and for throwing out proclamations to the crowds assembled below. The bodies of many men, treacherously murdered, have been flung from these windows. Battlements bristle from the roof. In those days, under all ornamentation



THE PIAZZA AT SIENNA AND ITS NEIGHBOURHOOD

Restoration by M. E. Hébrard.

means of defense were concealed. A gigantic but slender double-battlemented tower rises to a prodigious height on the left. This is the city tower from the pinnacle of which the flying flag communicates with neighbouring towns. At the foot of this tower, elegantly framed beneath a canopy of marble, runs the Fountain Gaia, which in the 14th century for the first time, amid universal cries of joy, brought water into the public square." (TAINÉ.)

In a semicircle opposite the Palazzo Pubblico stand the battlemented walls of rival palaces. Nowhere in the world has architecture mingled so much beauty with so much menace. In reading the history of this city, one can but wonder how such rude shocks, such violent, almost uninterrupted troubles could accompany such incomparable artistic advance and permit the creation of such works. External wars against Pisa and Florence, the hated rivals, terrible and ceaseless street fights among citizens, nobles and populace, banishments which by turns threw out of the city walls a

the ideas and words that crowd to mind. All is marble, white marble, of which the immaculate whiteness glistens in the azure. "

As the founders conceived it, so the old Piazza of Pisa has survived, while beside it without surrounding it, the grey and mournful modern city has grown up. The Dome, or cathedral, is the chief work. In the composite style of its arrangement, the antique Gothic and Roman elements reappear, but the dawning of a new art is foreseen.

The Baptistery is but an isolated dome, very simple in shape and structure. As upon the cathedral which it faces, rows of pilasters and little colonnades adorned with a few Gothic ornaments are placed one above the other.

The Campo Santo, built at about the same time, is composed of a sort of cloister surrounding a narrow cemetery. It was here that after the Holy Land was forsaken, an archbishop of Pisa had fifty three shiploads of earth brought from Mount Calvary. The cloister spreads 62 Gothic arcades, a white and fine lace-work of stone, around a few gloomy cypresses. Admiring frescoes, of which the remains are still precious, once covered the walls at the back of this peristyle.

Beside the cathedral stands the Leaning Tower, which serves as belfry, and is made of the same shining marble, decorated with the same rows of little colonnades. In no wise colossal, it reaches but 54 metres upward, and resembles skilfully chiselled ivory. So light does it appear that the spectator forgets its strange position. A plumb line dropped from the summit to earth reaches about four metres from the base. The inclination, caused by an unequal piling of the soil, occurred while the first tiers were being built. The architects, unmoved, continued to build, contenting themselves with slightly straightening the axis of the tower as they added stories to it. This singular building, which seems to defy the laws of equilibrium, against all probability has remained unaltered. In this extraordinary flowering of Italian architecture, even the most abnormal works were born with vitality.

SIENNA

Sienna, younger sister of Pisa, produces a stronger and more sombre impression. Throughout the town we find traces of the violence and war-like spirit which made these cities of art the scene of so many tragedies. Its steep and magnificent situation is as if chosen for war. Three lonely hills uphold it as upon a pedestal. In the centre of the narrow plateau formed by their close lying summits, dips the amphitheatre of the Piazza del Campo hollowed like a wide basin. This was the *forum* of the old Siennese Republic.

Tortuous, uneven streets, bestridden by Gothic arcades lead up to it. High houses with fortified bastions, few and narrow windows, sometimes

like a vestibule, must be crossed. Such is the composition of the group.

When sailing towards the landing-place, the Palace of the Doges, which though Gothic in detail nevertheless suggests the Orient, is the first to come into view. The two façades, turned to the sea and to the Piazzetta, are alike and built in three stories, oddly arranged. At the base is a row of strong and simple Gothic arcades, so short that they seem sunk in the ground, like piles, under the weight of the upper stories. Above, comes a closer gallery of much higher columns and arches, crowned with as many



VENICE. — THE PIAZZA SAN MARCO SEEN FROM THE SEA

open-work rosettes. Finally, there rises a heavy surface of wall scarcely lightened by a few Gothic windows and higher than the supporting colonnades. Surmounted by a carved railing, this whole surface is ornamented like an Oriental carpet. Everything in this arrangement is paradoxical. Upon reflection it becomes evident that the two Gothic colonnades are crushed by the height and weight of the third story; in the presence of the building, its charm is such that this strangeness passes unobserved. A minute and varied decoration attracts attention to the Gothic arcades. In the centre of the second story colonnade, two red marble columns sharply mark the spot from whence formerly death sentences were proclaimed to the waiting crowd in the Piazzetta. Close by, between two high columns which upon wide capitals display from afar the statues of St Theodore and of the Winged Lion, emblem of Venetian might, these sentences were carried into execution upon the flag-stones of the landing.

The third side of the façade, seen by taking a few steps along the em-

host of nobles or of artisans, wholesale executions and, to cap the climax of horrors, the pest, which falling upon the city, in a few days carried away thirty thousand souls : such is the history of Sienna during the glorious and tragic period which saw the palaces of the Piazza and the Cathedral rise upon its pavements.

Once, however, the strength of the valiant town failed, inferior to the artistic task that it had set itself in a day of mad ambition. In 1340 the citizens of Sienna prepared plans for an immense cathedral which was to be counted among the colossal structures of the world. Some idea of the projected plan can be gathered by considering that the cathedral as it now stands, was to be but a transept of the whole. In 1340 the work began at a place where stood an unfinished church not far from the Piazza del Campo, upon the highest point of the town. In spite of wars and civil discord, the gigantic enterprise was carried on till, in 1348, the pest discontinued it forever. In a few years the population of the city dropped from 100 000 to 60 000 souls. Of the immense structure only a few isolated parts are still standing, but these are of a magnificent style. The finished transept out of which the new cathedral was made, is perhaps the masterpiece of Italian Gothic architecture.

VENICE. — THE PIAZZA SAN MARCO

The strange and magnificent architecture of Venice, corresponds to the situation and history of the town. Floating city, anchored between Italy and the Orient, Venice is adorned by the riches of two worlds. Made opulent by commerce and victorious wars, there grew here an insatiate taste for luxury and costly splendours. Venetian mariners visited and stripped the ruins of antique cities to decorate their own. From Greece, Egypt and Asia Minor, they brought statues and precious marbles. Byzantine art was known at its height, and the architects of Venetian churches were able to see St Sophia before the profanations of Mohammed II. Neither were they ignorant of the great new works of the West, the Romanesque churches of France and the Gothic flowering. All these styles, adopted by the Venetians, acquired a new individuality, and a selection from the best of these produced eclectic works of a richness surpassing that of Oriental monuments.

In the centre of the city, very varied buildings were gradually grouped upon the narrow band of moving earth which, barely rising above the lagoons, faces the Adriatic. The earliest of these was the basilica of Saint Mark with its high Campanile; then the rectangular esplanade of the Piazza. Later, between the Piazza and a narrow canal, came the celebrated Palace of the Doges with one face turned towards the sea; then the three great buildings, which surround with a continuous colonnade three sides of the Piazza opposite the basilica. Coming to the Palace of the Doges from the sea, to reach the great Piazza, the Piazzetta, a smaller esplanade

the banks of the Arno. Shortly after the year 1300, the impetus was given and architectural projects were multiplied. More powerful than Sienna and Pisa, Florence had greater resources by means of which to realise as great designs, and her transformation was not arrested by a premature decadence. The cathedral foundations were laid in 1294 from the plans of Arnolfo di Cambio. Giotto, the renovator of painting and at times also architect, had a hand in all the great works of the city. It is a typical detail that the vast walls of the cathedral were built while the form of covering to be given it was still undecided. Such was the haste to build, and such the confi-



Phot. Brogi.

FLORENCE. — GENERAL VIEW OF THE CITY

dence felt in the architects' genius, that the heaviest part of the work was finished before a plan was made for the cupola. Beside the edifice, Giotto raised his Campanile, a square tower, 84 metres high, all clad in variegated marbles. It is a belfry in the Italian style, separated from the church and without a pointed spire. At the same time, the Baptistery was built close at hand and decorated with a not yet customary magnificence and care. When it was proposed that its bronze doors should be sculptured, the Republic decided to open a competition. Florence was delighted with this artistic joust, which attracted foreign artists and resulted in the uncontested triumph of Ghiberti, whose still uninjured work alone is worthy of a pilgrimage. Another Florentine, one of the great masters of the Italian Renaissance, Brunellesco, who had taken part in the contest, decided upon a revenge, and went to Rome to study the great works of antiquity. When he returned to his native town, all minds were concerned with a notable enterprise. The time had come to complete the cathedral begun by Arnolfo di Cambio. Above the transepts a place was ready for a gigantic cupola, but no design had as yet been made. Brunellesco proposed a bold solution, which he afterwards

bankment *dei Schiavoni*, is without colonnade and drops straight into the sombre waters of the canal. At the second story projects the celebrated Bridge of Sighs, leading from the ducal tribunal to the prisons on the opposite shore. The interior of the palace is symmetrically built around three sides of a court and is perhaps more richly decorated than are the façades. From this the Giants' Stairway, at the top of which stand Mars and Neptune, by Sansovino, leads to the reception rooms.

Going from the Piazzetta to the Piazza, the façade of the church of St Mark is the first to attract attention. Its domes, gildings and portals covered with ornamentation and of a style in no way related to the Doges' Palace, arouse wonder. The present building, several times remodelled, envelops and covers an old Roman chapel, itself built upon the remains of a yet older sanctuary: the one in which the relics of St Mark, brought from Alexandria were placed in the 9th century. The general plan, directly derived from pure Byzantine models, forms a Greek cross. The covering consists of a great, central cupola, surrounded by four smaller cupolas on the four arms of the cross. To the North and West, along the Piazza San Marco, spreads a sort of vestibule or peristyle also covered by little cupolas. There is nothing colossal either in the parts or the whole of this building, nor does the plan of the cupola show any novelty; yet the effect produced by the ensemble, especially as seen from the interior, has nothing to compare with it. A few Gothic designs introduced into the façade, give it a special character. Above the principal porch stand the celebrated bronze horses, that perhaps once ornamented one of Trajan's edifices in Rome, were taken by Constantine to Byzantium and brought to Venice upon the ships of the Doge Dandolo. The inner surface of the cupolas, under the peristyle as well as in the interior of the church, is richly decorated with multicoloured mosaics upon a gold background; these pictures, flashing a sombre fire through the half-light of the interior, cover the incredible space of 4240 square metres. Beneath them, the precious marbles of columns, the gold, and gems of lamps hanging above the altars, shine in shadow. Upon the surface of the rear wall, under the curve of an arch and against a background of glistening gold, appears the giant half figure of the Redeemer.

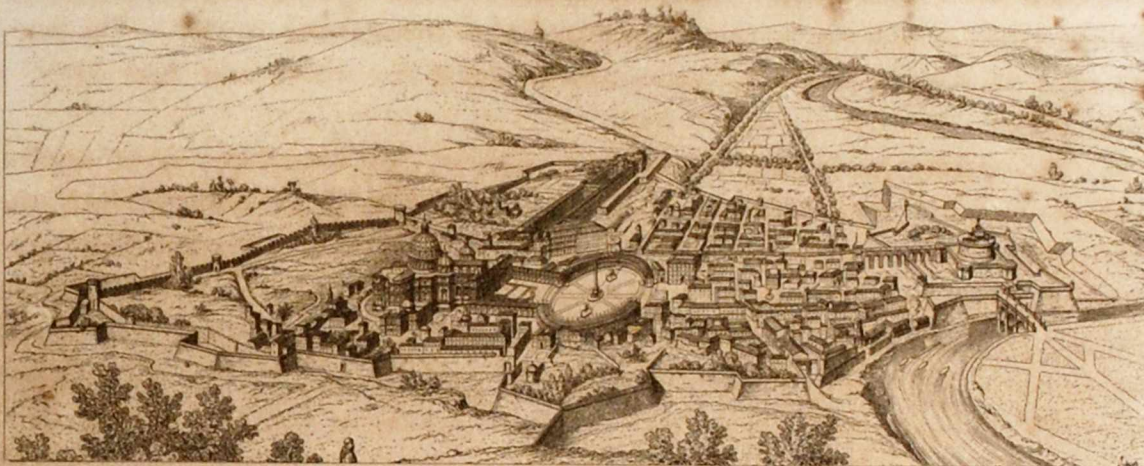
The domes of St Mark's rise but slightly above the neighbouring constructions. Had the architects stopped at the buildings mentioned, this fine group, like many Greek and Roman architectural compositions, might have been reproached with being too flat. But, far above its highest pinnacles, rises, like a mast raised upon a galley, the very tall and very graceful Campanile.

FLORENCE. — SANTA MARIA DEL FIORI

The light and mighty dome by Brunellesco dominates the whole city. Moreover, it marks the essential date in the artistic history of Florence, if not of all Italy. The artistic fever, called the Renaissance, began early on

art, the popes are the latest. But to their initiative art owes more than to that of all their predecessors. By their will Rome became the artistic capital of the universe. Untiringly they pursued the task of collecting the most beautiful works upon the Vatican hill, the centre of Christianity, and of placing them in the most magnificent frame. In all history, there is not another example of so persevering an ambition coinciding with so much productiveness in all the arts.

Papacy, was only definitely established in Rome under Martin V, towards 1420. Many years were required to regain the power lost in exile and anarchy.



ROME. — ST PETER'S AND THE LEONINE CITY

From Letarouilly.

Thus the greater progress made earlier by the Northern Italian States is easily explained. Florence already possessed the above described buildings when Rome was still an inglorious city, in which a despised people lived among ruins.

The name of Nicolas V is one to be remembered. This pope is really the one who introduced the Renaissance into the Roman States. Like his predecessors, Martin V and Eugene IV, he had lived in Florence and brought with him ardent ambitions. At one stroke, he planned the whole transformation of the Eternal City. The period was one in which all minds turned to history and to ancient art. Nicolas V dreamed of restoring the capital to its old splendour of the time of the Caesars. From Florence he summoned the architect Battista Alberti, who took entire control of his enterprises. His attention was not only fixed upon the Church and the Papal residence, but upon the other side of the Tiber, still covered with the fragments of Pagan Rome. There he desired, in the place of the old, to build a new city divided by wide avenues, with a kernel of magnificent palaces in the centre. At the time of the pope's death, in 1455, this plan was still being studied. In the Leonine city, work upon the Vatican and the Basilica of St Peter's was already begun. At this period began the transformations of the old church, pursued through several centuries.

Since the time of Constantine, the most celebrated of all Roman basi-

carried out but which at the time was declared by everybody to be impossible. In 1420 he succeeded in having another competition opened for the building of the dome. He himself refrained from presenting any plan, but criticised every solution offered, proving it inadmissible. Finally, he again exhibited his own conception. According to his idea, a cupola like that of the Pantheon of Agrippa must be placed at the crossing of the transepts. To sustain his proposition he exhibited a modelled relief of the building thus crowned. After much hesitation he was given the task and set to work with the aid, at first, of his old rival Ghiberti. A talented sculptor but an indifferent architect, Ghiberti soon left him sole master. The works were carried on so rapidly that at the time of Brunellesco's death, in 1446, there was only to add the lantern.

This cupola is not only larger than that of St Peter's in Rome, but stronger. Its very outline gives the impression of an immovable mass. Brunellesco said that he took his inspiration from the Pantheon of Agrippa, but truth to say, his work is far superior to the model. He took but a technical lesson from the ancients. The graceful curve of the dome, the design of the crowning lantern and of the drum are all his own invention. Thus completed, the cathedral of Florence attests, from the very beginning of the Renaissance, the absolute superiority of Italian architects. Already they had no rivals to conquer, either in their own time or in past centuries. The light, eight-panelled dome springs towards heaven with as much ease and majesty as a Gothic spire, and lifts the cross it supports to 119 metres skyward. Beside it stands the great campanile of Giotto, measuring 84 metres. In the struggle between belfry and cupola, the belfry is vanquished.

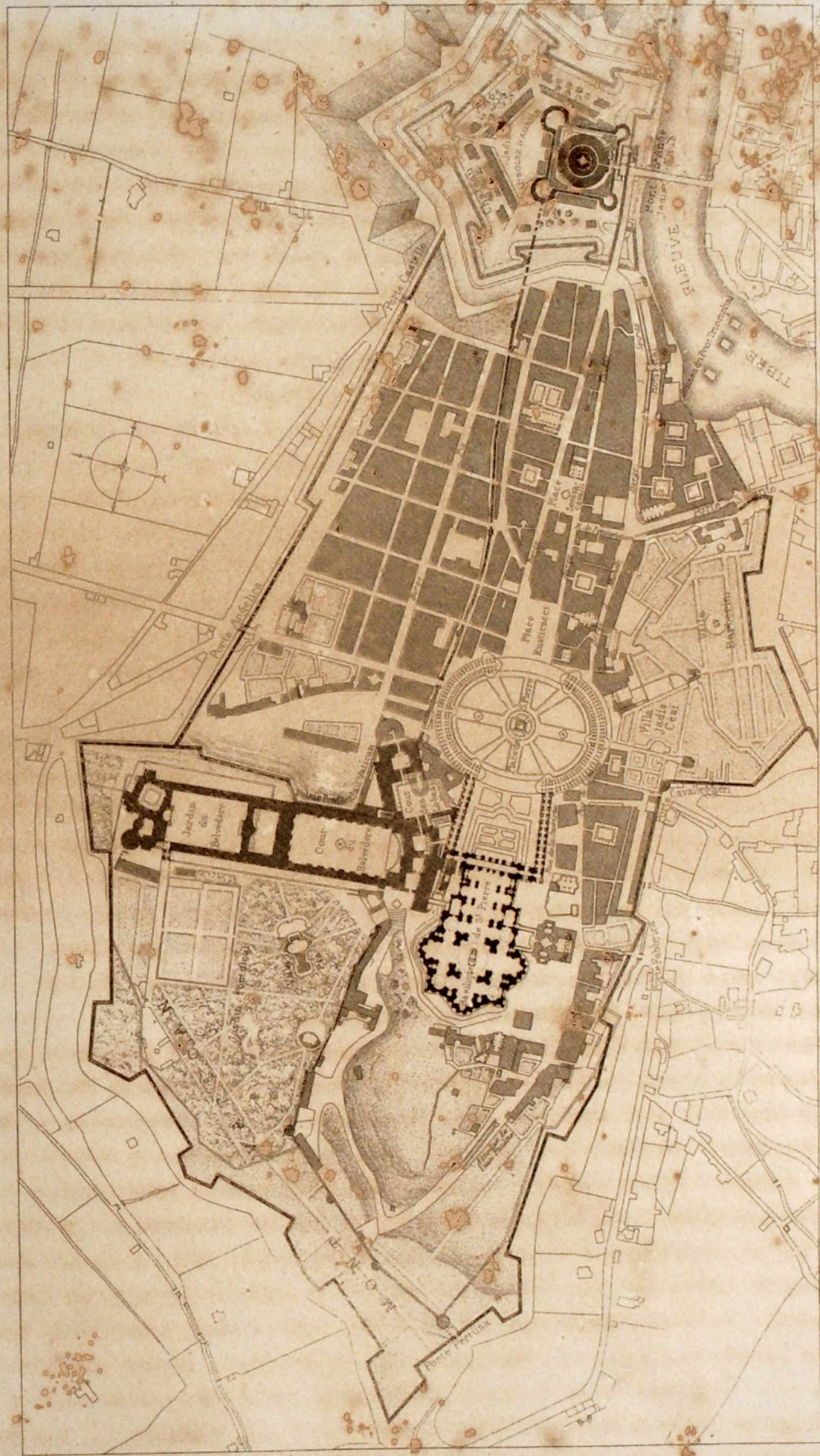
The Cathedral with its dome, the Campanile and Baptistry form an architectural religious group such as Italy had not yet possessed.

V

ST PETER'S AT ROME AND THE VATICAN

This monumental group surpasses in grandeur all that architecture has achieved since the culmination of the Roman Empire. In Rome, spiritual centre of the mediaeval world, is raised the largest monument of Christian art. St Peter's becomes the universal temple of all Christianity. For the first time since the decline of the Roman power, the aspirations and the artistic and material energy of an immense group of people are expressed in a single architectural structure. St Peter's and the Vatican correspond by their size and impressiveness to their unique and universal character. The very history of their construction, so patiently pursued, proves the superior significance attached to this monument.

It is in Rome that the Italian Renaissance flowered fully, and crowned its work with the Vatican and St Peter's, the largest of churches and the richest of palaces. Of all the great patrons who favoured the rise of Italian



ROME - SAINT PIERRE, LE VATICAN ET LA CITÉ LÉONINE

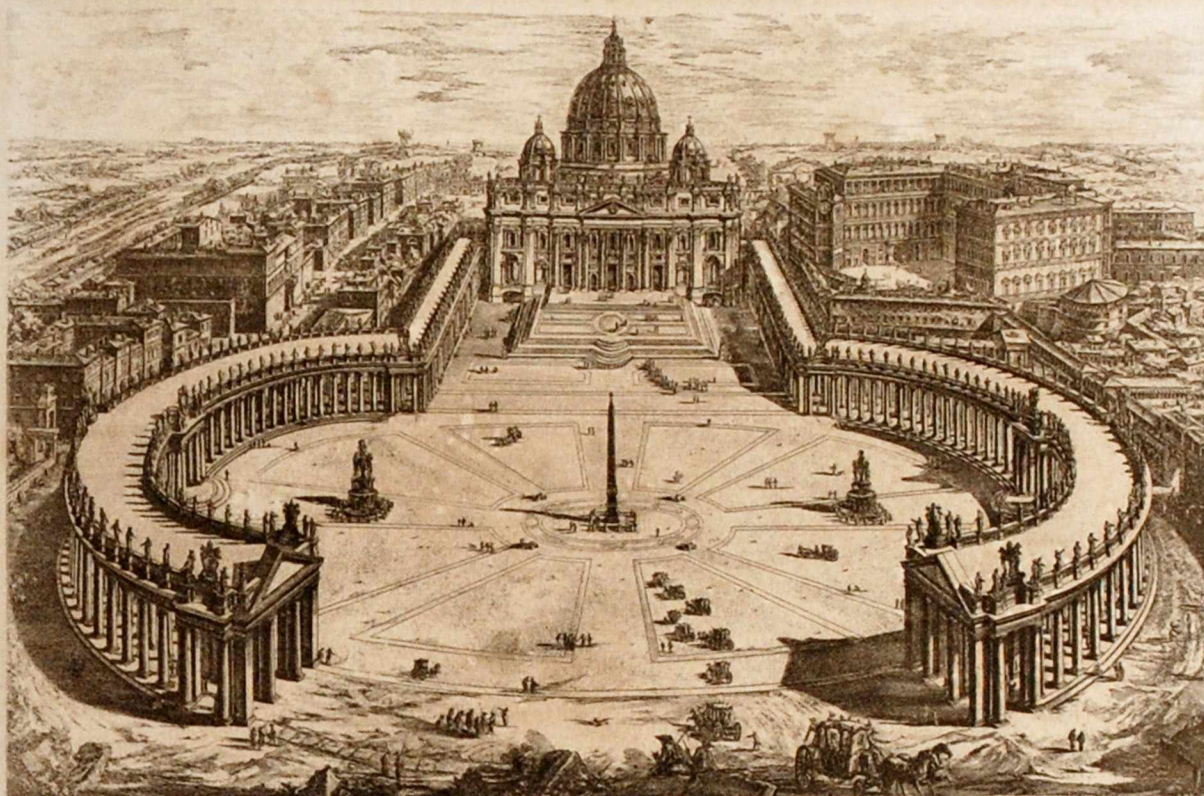
licas stood upon the site now occupied by the great dome. It had been built, at the request of Pope Sylvester, on the spot where formerly spread the Circus and Gardens of Nero. Tradition adds that as early as the year 80 A. D. Pope Anacletus had dedicated a small oratory at this place, in memory of the Christians massacred after the burning of Rome, and of those who, covered with pitch by order of the Emperor, had served as living torches to illumine his nocturnal feasts. This basilica of Constantines, built upon the tomb of St Peter, was a building with five naves and a transept, of the same type as the earliest Roman churches. In front of the façade was an atrium enclosed by a colonnade. Chapels and convents were grouped around it. In the time of Nicolas V these buildings were threatening to fall. The pope decided to restore the large naves and to build the whole rear part upon a new plan.

The drawings of two Florentines, Alberti and Rosellino, were approved of, and the building was begun in 1450. The spade was put into the old apses and even the transepts were thrown down. Foundations were laid for a new choir and new transepts and for the bases of four strong pillars. Nicolas V desired to place a vast cupola upon these, to rival the one at Florence built by Brunellesco over Santa Maria dei Fiori. The façade was not to be touched, but a great place was to be drawn in front of it and decorated with fountains and statues. The pope intended to have the obelisk from the Circus of Nero placed in the centre. Thanks to the gifts which had flowed to Rome at the time of the Jubilee of 1450, the works were being vigorously carried on, when the death of Nicolas V stopped them abruptly. Of all the plans drawn by Alberti only one was finished. There had only been time to complete this structure in the midst of the confused and poor looking buildings which were then the Papal residence. The Florentine successors respected this and it still bears the sculptured arms of Nicolas V. This is the building that behind severe walls shelters the frescoes of Pinturicchio and the Raphael. The pope had entrusted the decoration to Fra Angelico, whom he had lured from Florence to make him his painter and his friend. Both died within a few days of one another, leaving their work but barely begun.

Not until fifty years later was the basilica continued. Nor was it yet the intention to finish Rosellino's construction, but first to join to the church a chapel in which Julius II desired, during his own lifetime, to erect his mausoleum. This new plan tallied poorly with the restoration already begun. Necessarily another design had to be made, and it was decided to leave nothing standing of the old structure. It seems that the pope then organised a sort of competition in which such architects as San-Gallo took part.

The plan chosen was one by a Lombard, called Bramante. A whole collection of drawings and studies by Bramante and his rivals for the reconstruction of St Peter's, are kept in the Uffizi Museum at Florence. These

the outer covering in such manner that if instead of placing a lantern at the top the upper curve were followed, the profile of a pointed arch would be obtained. From the technical point of view, as well as from that of appearance, this correction was an improvement upon the original plan. The cupola thus raised supports the colossal weight of the lantern much more easily. With the exception of this happy touch by della Porta, the dome of



ROME. — BIRD'S EYE VIEW OF SAINT PETER'S
From Piranesi.

St Peter's as it now stands is the work of Michael Angelo. It dominates the Vatican and the whole Roman horizon in much the same way as the great personality of the master dominates the whole period of the Renaissance. Many architects have since taken it as model but their imitations have never kept the same perfect balance between power and lightness.

Including the drum, this enormous stone mass rises 94 metres above the roof of the basilica and over 130 metres above the pavement. Its width at the base is 42 metres; its circumference 192. The stairs leading from the drum to the lantern, wind between the two caps of the dome. The enormous height of the building can hardly be realised without making this ascent. The whole Roman Campagna, as far as the sea, comes into view. Around the cupola other domes are discovered upon the immense roof of the basilica, spires, galleries, little dwellings for workmen and guardians, — a sort of unsuspected city, lodged there as upon a mountain. The dome of Michael Angelo and della Porta has not quite so wide an opening as that of

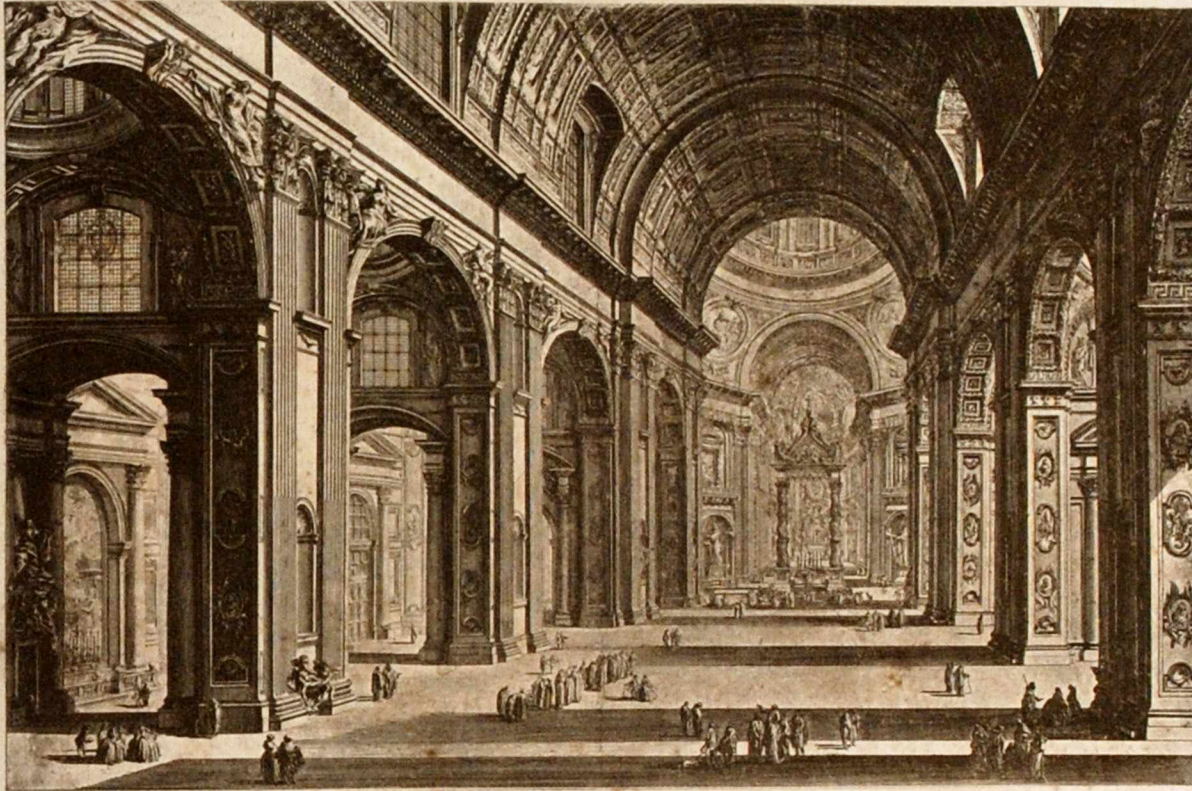
precious documents must be examined in order to realise how much labour is hidden in the so spontaneous seeming creations of the Italian Renaissance. The plan by Bramante, known to us in detail, is particularly admirable for balance and simplicity. It gave the new church the form of a Greek cross, with four arms ending in semicircles. A gigantic dome was to cover the central space and four lesser domes the four radiating naves. Four chapels, also in the shape of a cross and terminating in apses, were to be lodged in the corners left by the arms of the central cross. The arrangement of Bramante's basilica recalls some of the Byzantine churches, of which the plan exactly fits into a square and the secondary cupolas prop the central one. It is distinguished from these by a clearer drawing of the cross.

The works, solemnly inaugurated before an assembly of cardinals in 1506, were not carried on without some set-backs. Eager to see the great cupola built, the pope counselled deferring the construction of two of the arms of the cross, which were needed to buttress the chief pillars. The dome was hardly begun when these high masses of masonry began to crack and give way. They were judged insufficient, and to strengthen them, were enveloped in an enormously thick casing. Bramante died in 1514 and left his work interrupted and endangered. Julius III made Raphael his successor, assisted by Fra Giocondo and San-Gallo.

Raphael proposed a new plan which returned to the Latin cross and destroyed all the simplicity and grandeur of Bramante's design. His premature death prevented its being carried out. He did nothing more than strengthen the four great pillars which were giving way under the weight of the cupola. Baldassare Peruzzi, a young Siennese, already celebrated for having built the Farnesina, succeeded him. Leaving aside Raphael's plan, he immediately went back to the one by Bramante and decided upon the Greek cross with large apses at the extremities of the four arms. However Peruzzi, like Raphael, died having only widened the chief pillars.

Then it was that Michael Angelo came upon the scene. He was no less than seventy two years old when Paul III gave him the direction of the works. He had just won a competition over San-Gallo for the completion of the Farnese palace. His decision and will gave to the slumbering works their former activity. From the first he adhered to Bramante's plan and in this made no important changes. The drawing he has left us keeps to the Greek cross, but the semicircle of the front nave is dissimulated by a great façade ornamented with porticoes. The new plan was entirely carried out except this façade which was barely begun when the master died, and it was condemned by his successors. Michael Angelo had time to build the drum of the dome. Giacomo della Porta crowned the edifice. Like Brunellesco, Bramante had said that he would put the covering of the Pantheon of Agrippa upon the Basilica. His first plan showed a heavy flat dome. Upon the same basis della Porta drew a cupola of quite a different outline. He raised

one is crushed by the others. But the dome at once attracts one's attention, and there the whole effect concentrates. A stream of light falls from the high windows of the drum and floods the vast space between the four enormous pillars. The sombre vaulting of the great nave leads the gaze towards this vaporous light, in the midst of which the columns of a sumptuous baldachin rise in gilded spirals, like the smoke of incense. On the marble frieze beneath the dome are the gigantic letters of the celebrated inscription



ROME. — INTERIOR OF ST PETER'S
From Piranesi.

tion : TU ES PETRUS ET SUPER HANC PETRAM AEDIFICABO ECCLESIAM MEAM. This it is which consecrates the basilica as the one house of the universal God. The completion of St Peter's and the placing of this dedication mark a triumphal date both in the history of Christianity and of art. Formerly the Hebrews had desired, and thought to build the most beautiful monument upon earth to Jehovah. In the thought of its founder, the Temple of Solomon already had this unique and universal character. But the Jewish people, outdone by all their neighbours in the realm of art, had not been able to carry their work to the height of their ambition. The new temple, that of Rome and of Catholicism, was indeed such as the popes had dreamed it, the vastest and the richest in the world.

While the construction of the basilica was slowly progressing, the Vatican was gradually taking on the appearance of a great palace. To the building formerly erected by Nicolas V, in which are now the celebrated

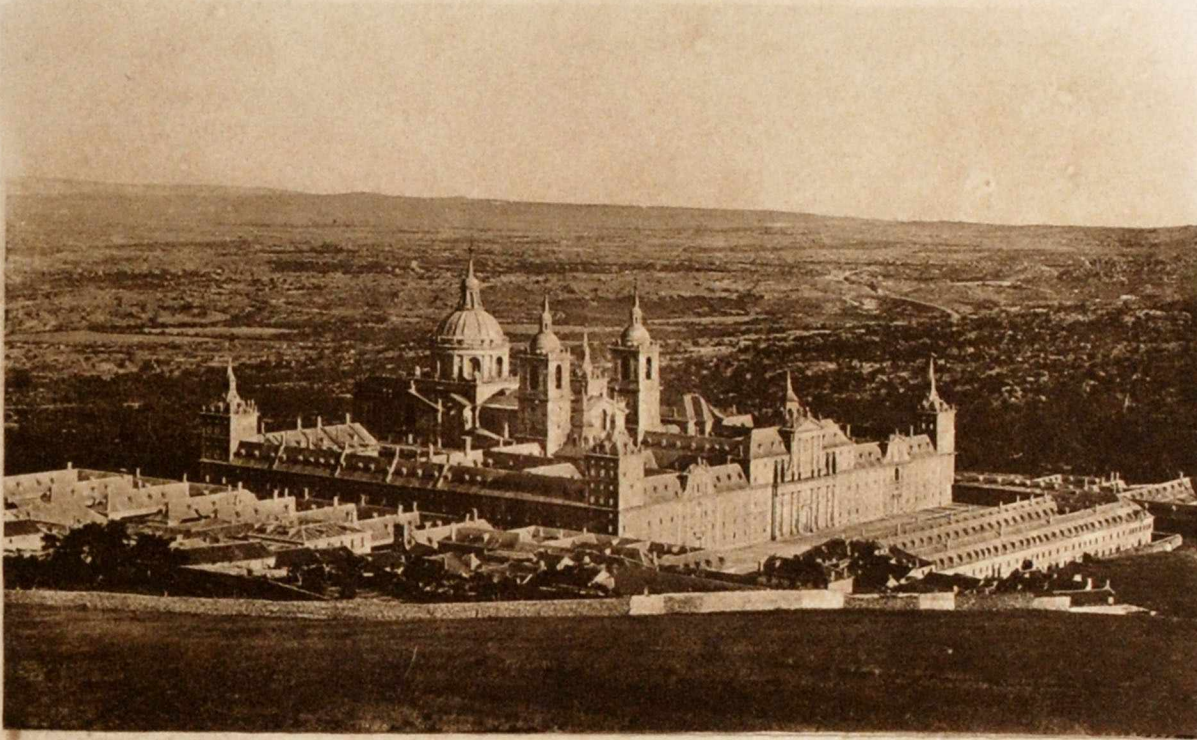
Agrippa's Pantheon, but in height it surpasses all constructions of the kind. The great Byzantine cupolas, like the one of St Sophia's may give as great an impression of might and majesty; but they lack the same audacious sweep heavenward.

After the completion of the dome, St Peter's had not yet reached the end of its vicissitudes. At the death of della Porta there was still to build a façade. Pope Paul V had the unfortunate idea of returning to Raphael's plan and to the Latin cross. He wished, it is said, to leave none of the ground uncovered that was once occupied by the old basilica of Constantine. The foundations already built for Michael Angelo's projected façade were, therefore, thrown down and the front of the building was brought forward about 80 metres to the East. The present façade, of barocco style, was then erected by Carlo Maderna. Its principle defect is that of masking a part of the dome from spectators standing even at a considerable distance from the building. Fault may also be found with the windows and horizontal divisions which might suit a palace, but are not in character with the rest of Bramante's structure. Bernini, who succeeded Maderna, wished to erect two great campaniles on the right and left; barely begun, his project was abandoned, but the two immense colonnades that, like two great arms encircle the whole space in front of St Peter's, are due to him. Twelve years were required to erect this forest of columns. In itself this construction is not very seductive and has been sharply criticised for its heavy barocco style. On the whole, however, it fulfils its aim, which is to isolate the basilica from the surrounding landscape, mask the neighbouring houses and direct the spectator's whole attention towards the façade and the dome. The fine obelisk from the Circus Maximus, once brought from Heliopolis by Caligula, was raised in the centre. The last addition to Bramante's plan dates from the end of the 18th century. It is a vast sacristy, built under Pius VI, by Carlo Marchionne.

Even without these annexes, St Peter's is the largest church in the world. It covers a surface of 15 160 sq. metres and is twice the size of St Paul's in London, and nearly three times larger than Notre Dame of Paris. The Milan cathedral comes next, with a surface of 11 700 sq. metres. St Sophia's, at Constantinople, covers but 6 890 metres; the dome at Cologne 6 166 metres. The total length of the basilica, from the apse to the portico, reaches 211 metres; the cradle of the great nave rises to 46 metres. From the first works done from the plans by Bramante, till the completion of Bernini's colonnade, the Papacy spent 47 million crowns, or about 235 million francs, on the building.

As yet we have not entered the structure. Truth to say, the threshold crossed one is a little surprised not to find the interior more gigantic. This quality, or defect, is due to a just proportion of the parts, of which no

The unquiet faith of its founder prostrated it there at the feet of a crushing mass, that none might say that he endeavoured to exalt the works of men. To appreciate its unusual dimensions one must scale the first heights, dominate the structure and see it outlined against the vast horizon of the plain. Together with the severity of the mountains and the sterile plain, — hopeless land that seems made for expiation, — the grey mass of the Escorial forms as it were a landscape from Purgatory.



MADRID. — THE ESCURIAL

During the battle of St Quentin the artillery of Philip II destroyed a church dedicated to St Laurence, a Roman soldier of Spanish race. It is said the king vowed to repair the injury by erecting a monastery to this saint. The Escorial would thus be an expiatory monument, and the greatest of its kind. Whether true or false, this tradition corresponds well with the appearance of the building, and with the site chosen.

But Philip II intended to do more than build a monastery and establish there a religious order. The profound impression made upon him, by the abdication of Charles V inclined him to prepare for himself a monasterial retreat. Like the Palace of Spalato, the Escorial, though a retreat, is as vast as a city. But to the idea of renunciation and of asceticism a king of Spain still attached the idea of his own majesty and a passion for grandeur. From this twofold sentiment is born the colossal and sombre art which is given strongest expression in the Escorial. In this architecture, from the colour of grey granite to the inflexible lines of the plan, everything is funereal. In truth, this gloomy character is not only due to the royal tombs

Borgia apartments and the Raphael, a powerful tower was first added, La Torre Borgia, built by Alexander VI. Like the old palaces of Sienna and Florence, the house of the popes still kept the character of a fortress. In 1481 Sixtus IV began, in the rear of the old building, the famous Sistine Chapel, of a severe architecture which recalls the oldest basilicas. In the following years the walls began to be covered with admirable frescoes by Perugino, Botticelli, and Pinturicchio. Later, to complete this decoration, unique in the world, Michael Angelo painted his ceiling and his immense Last Judgment.

At a short distance from the palaces, Innocent VIII built the summer pavilion, or Belvedere in the gardens. A little valley spread between the two buildings. Julius II wished to bind these to one another by means of two long galleries, surrounding a kind of circus. This plan, studied by Bramante, could only be half carried out. Later additions, especially those of Sixtus V, destroyed the intended effect. But work was actively carried on in another direction. Bramante had drawn the plan of buildings to surround the Court of St Damasus. Raphael was ordered to carry them out. On one side he erected the high façade and the Loggia decorated by his paintings. Paul III had a new chapel built; Sixtus V a library, which cut in two the great court designed by Bramante. Later were erected the vast halls which to-day shelter the antique sculptures, the hall of the Greek Cross and the Braccio Nuovo.

VI

THE ESCURIAL

In the 16th century, when the spiritual supremacy of Rome is already in its decline, the Escorial of Philip II in Catholic Spain still shows the influence and creative power of the Roman religion.

The Escorial is one of those buildings which forms an intimate part of a landscape. This monastery, which is also a sepulchre, needs the frame of a sombre and deserted nature. Such a setting was found after two years of search, it is said, by Philip II, not far from Madrid on the side of the Guadarrama.

Solitude begins at the very gates of the city. The road reaches the mountain over a rough, uncultivated plateau, scarcely coloured, here and there, by a poor and creeping vegetation. At a few hours from Madrid, the mournful domes and façades of the Monastery come into sight. Behind it, the mountains rise abruptly and cover it in shadow. In front of this enormous wall, the enormous building is humbled and appears insignificant.

VII

MOHAMMEDAN AND BUDDHIST ARCHITECTURE

The Mussulman and Buddhist peoples as well as the Christian nations form great groups. For a time their religious enthusiasm also gives birth to an ambition for conquest and universal centralisation, and causes the construction of magnificent monumental buildings.

Mohammedan art appeared at a moment when Byzantine architecture, in possession of all its resources, exercised a sort of supremacy throughout



JERUSALEM. — THE MOSQUE OF OMAR

Phot. Bonfils.

the Orient, and it was strongly influenced thereby. Originality in art was not an immediate consequence of the rapid development of Arabian power and of Mohammedan conquests in Asia, Africa and Southern Europe. The first notable Arabian monuments were erected only some time after the conquest. The earliest were imitations of Byzantine or Persian works. Later a new style was formed and rapidly increased in originality. The first buildings were of a religious character.

The mosque is a vast place of prayer and contemplation, where men unite to supplicate the one and universal God. In the centre is an ornate and spacious hall of monumental aspect; annexed to this are courtyards shaded by trees, cooled by fountains and enclosed between long porticoes. High towards heaven rise the slender, graceful turrets, called minarets, from which the priest calls the people to prayer. Often servants and ministers of the sacred spot inhabit buildings that surround these courtyards. Sometimes princely tombs are allowed in the mosque enclosure. Such is the theme to be developed. Clearly it is not without analogy to that treated by the

placed under church and dome. Philip II conceived this palace as a gigantic vault, in which he would some day wall in his own life with that of the monks already here dead to the world.

Therefore he gave the same minute and mournful care to this construction as others gave to their mausoleums. His plan once decided upon, and a situation chosen on the side of the Sierra, he summoned the most renowned architect of his epoch, Juan Bautista de Tolède. What part this artist had in the final work is not known. He died when, in 1563, the foundation stone had but just been laid. Like him, his successor, Juan de Herrera had studied in Rome. But there is nothing strictly Italian about the Escorial. The king himself directed the work and gave the architects his ideas and severe ideals. Doubtless the strange conception of the plan is his, that of a gridiron, to recall the martyrdom of St Laurence. On the South the royal residence represents the handle; the minor buildings, in cross rows within a great square, the cross-bars. From this arrangement result many square courtyards, all alike, suffocated between high walls.

Drawing near to the structure the barren immensity of the façade is above all else striking. The whole group forms but a single square granite block, like a tombstone. Great surfaces of wall, without projection or ornament, are only interrupted by low and narrow windows. These walls seem but a neglected coating, as if the monastery, closing its eyes to the outer world, looked only within, towards the church which it enfolds. To give an idea of the general dimensions and of the immense task accomplished within a few years, a few figures will not be out of place. In the whole building there are no less than 16 courtyards, 40 altars, 2373 windows, 1200 doors, 86 staircases. The entire length of the galleries attains the incredible figure of 160 kilometres. Many of the inhabitants of this labyrinth confess to never having visited the whole of it. The central church, which is as if drowned in the midst of buildings and lifts only its towers and a dome above them, is as large as a cathedral. The dome raises a bronze cross an hundred metres above the ground. Excepting some admirable bronze statues of kneeling princes, there is nothing rare or new beneath these arches; here again barren nudity and cold solemnity produce an ineffaceable impression.

At the four corners of the monastery, four massive towers with turrets correspond with the sharp outline of the central church. Outside, a large square sheet of water sleeps amid granite parapets and green trees. Coming from the cold galleries and sunless courts, the eye rests gratefully upon this bit of nature, austere and sombre though it be.

Nothing in this huge work reveals a truly creative genius, but such strictly observed coldness, imposed by an inflexible religion, makes of it a monument unique in the architecture of all centuries.

memory of his reign. The first mosque at Cordova, of which he laid the foundations in 785, covered but a fifth part of the space occupied by the building now standing. The roof rested upon ten rows of columns. Abderaman II thought this plan too meagre for the crowds of the faithful and of pilgrims that flocked to his capital. To his predecessor's structure he added



THE MOSQUE OF CORDOVA

Phot. Anderson.

seven new naves and eighty columns. Still later, a new Calif almost doubled the size of the mosque by adding fourteen new transversal bays. Thus enlarged, enriched by annexes, courtyards with porticoes, by three *mihirabs* and several minarets, the Mosque at Cordova was considered the most beautiful of all Islam. But still the ambition of the Califs was not satisfied. As the rapid slope of the ground made it impossible to spread in the same direction as before, seven new rows of columns were added along the whole length of the building. There were then nineteen parallel naves. The whole covered a rectangle of 180 by 130 metres, dimensions about equal to those of St Peter's at Rome. A front court occupies a third of this space, the hypostyle structure covers the rest. The whole is surrounded by a battlemented wall and flanked by 35 buttresses like towers. In the interior, there is no high forest with straight trunks all bathed in light, like the Egyptian hypostyle. The open-work arches of the vaultings cross and interlace at

Christian architects. Indeed the mosque strongly resembles the basilica of the first centuries, with its porticoed atrium, its fountain for ablutions, its belfry and its great hall with columns where the faithful met.

Novelty is chiefly apparent in the forms of the architectural details. The Arabs, no longer content with an evenly shaped, semicircular arch, lengthened it into the shape of a horse-shoe or pointed it at the top. The profile of the cupola itself was changed, more boldly raised, often



MECCA. — SACRED ENCLOSURE.

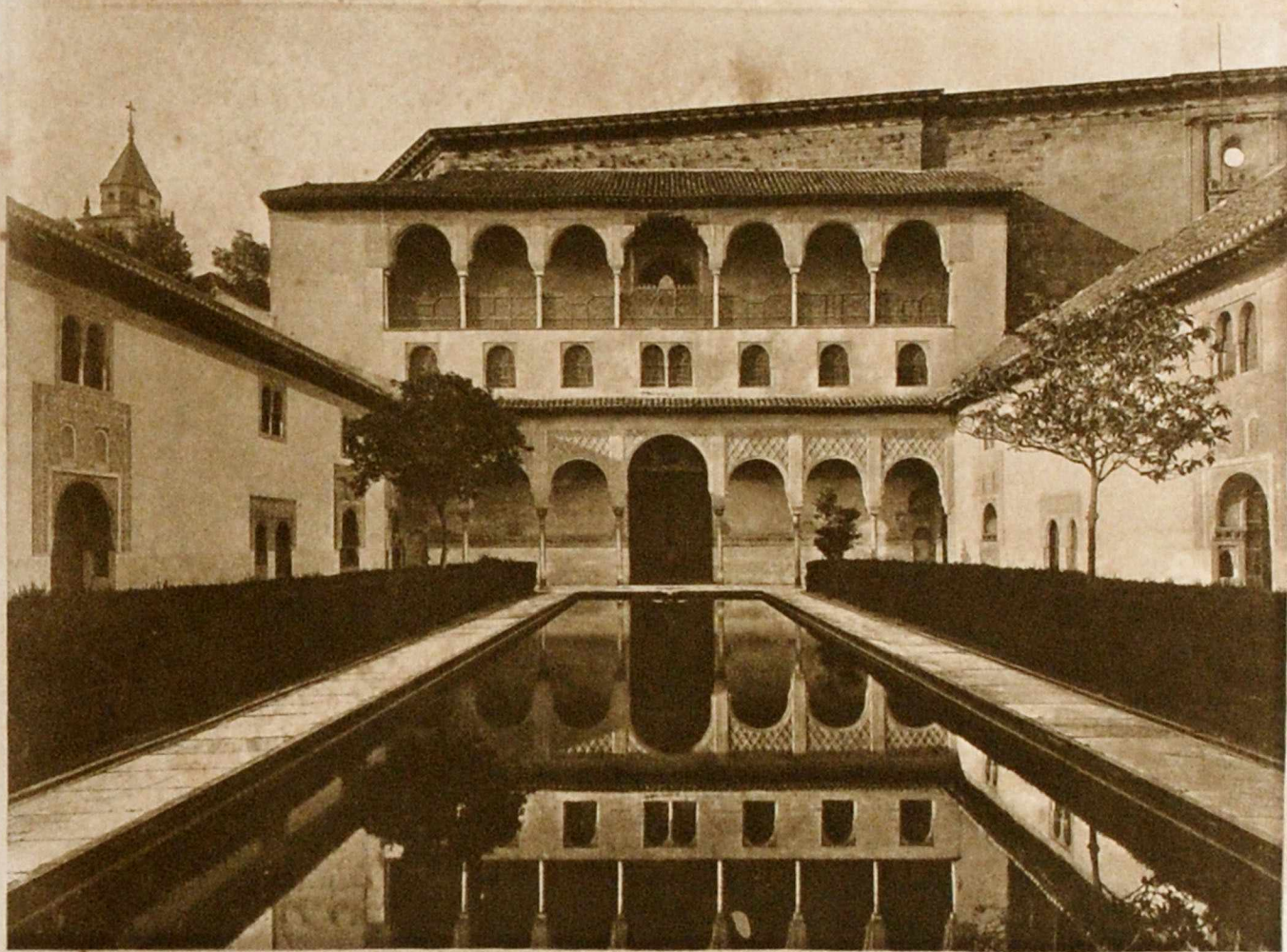
ended in a point and narrowed at the base, in the shape of a bulb. The celebrated Mosque of Omar, at Jerusalem, is a good example of a Mohammedan domed building.

The great Mosque at Mecca, the most revered of all buildings devoted to the Moslem cult is developed in long galleries about a great esplanade. Even as the mosque with a dome resembles a Byzantine church, there is a type of mosque with a wooden roof which strongly recalls the Latin basilica.

To this correspond the celebrated Mosque of the Omniades at Damascus, and, especially, the one at Cordova, the ancient Mesdjid al-Djamia of the Moors, now transformed into a cathedral. The founder of the latter, Abderaman I, desired to make it the largest and most sumptuous edifice not only of Spain but of the whole Mohammedan world. Through piety and love of glory he desired, like Justinian, to leave an unrivalled monument in

as oriental carpets, rest upon very slender colonnades; it would seem that in this palace of the Moorish kings, the builder had desired to recall the tent of the desert, of which the wide draperies hang upon wooden piles.

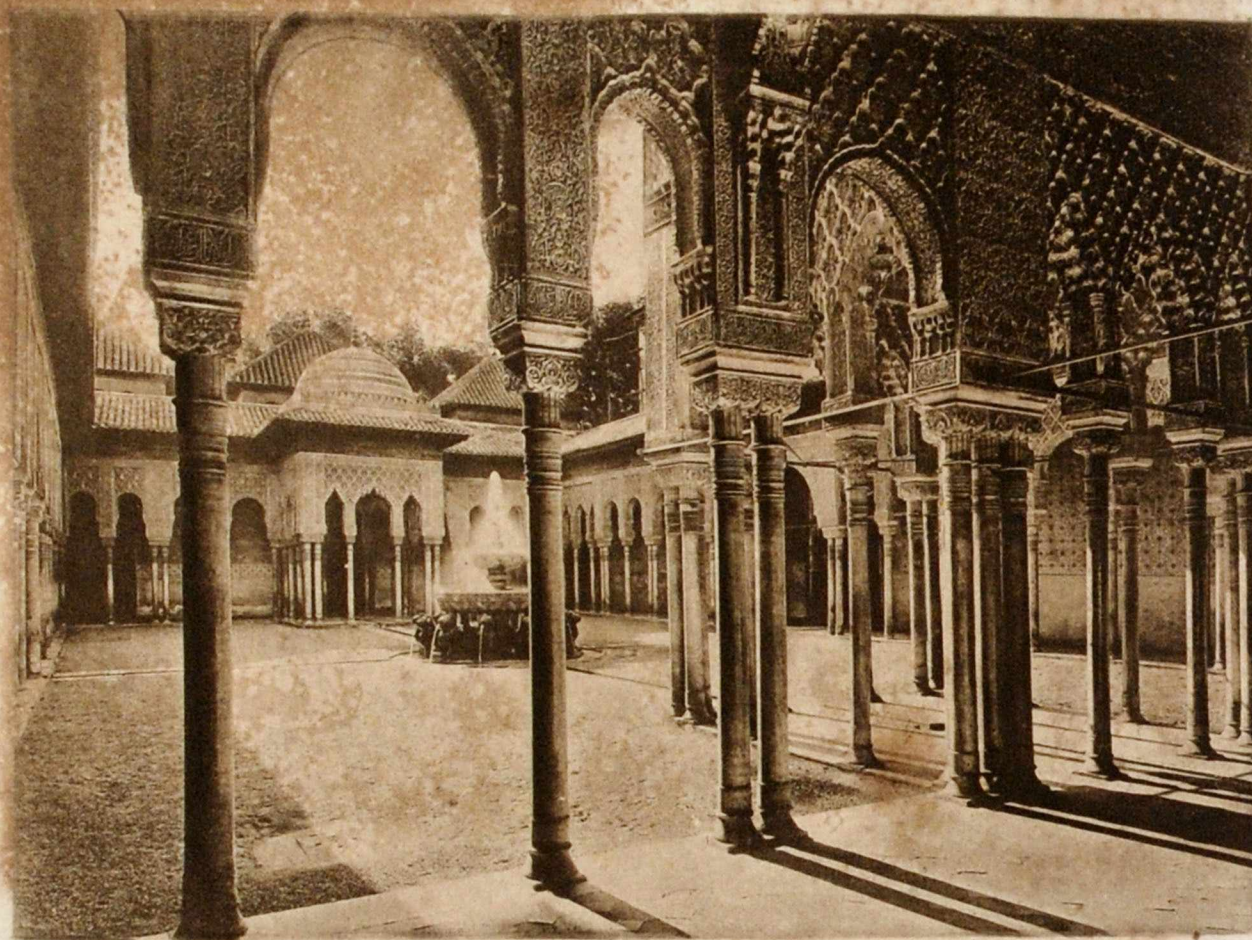
These fragile wonders would lose much of their beauty, however, were they seen out of the natural frame in which the architect has placed them, in a landscape both friendly and magnificent. Everywhere elms, orange



THE ALHAMBRA. — COURT OF THE MYRTLES

trees and cypresses surround the buildings and slip into the spaces between them, and from under branches and from beneath curved porticoes, is seen a whole horizon of verdant valleys and snowy peaks. No people knew better than the Arabs how to unite the charm of nature with the richness of structures, and no other architecture produces the same impression of voluptuous peace and mystery which is to-day felt within the walls of the Alhambra.

no great height. It is like a sacred wood, full of shadow, silence and mystery. Never in Mohammedan architecture was a greater task more patiently pursued. The Mosque at Cordova is perhaps not a masterpiece in detail, but it marks a great period in history, and shows that a whole dynasty of Califs persistently willed to leave behind a superhuman testimony of Arabian power and art. In all the centuries we have reviewed, one build-



Phot. Anderson.

THE ALHAMBRA. — COURT OF THE LIONS

ding only is, in this respect, to be compared with it: the Temple at Karnak, which took nearly two thousand years to complete.

In their princely dwellings no more than in their religious architecture, did the Arabs create any new architectural type; but their inventions in decorative art, their sense for the picturesque and their love of comfort gave their palaces a charm difficult to express. There is no more seductive residence in the world than the Alhambra. All the materials used, are of mediocre quality: wood and plaster without brilliancy or solidity. The decorative themes are few, for painters and sculptors, not permitting themselves to draw the human figure, were usually content with linear motives without counterpart in nature. Nevertheless these very simple means concur in making fairy-like and constantly varying effects. Fancy reigns over both architectural motives and ornamental forms. Heavy walls, as parti-coloured

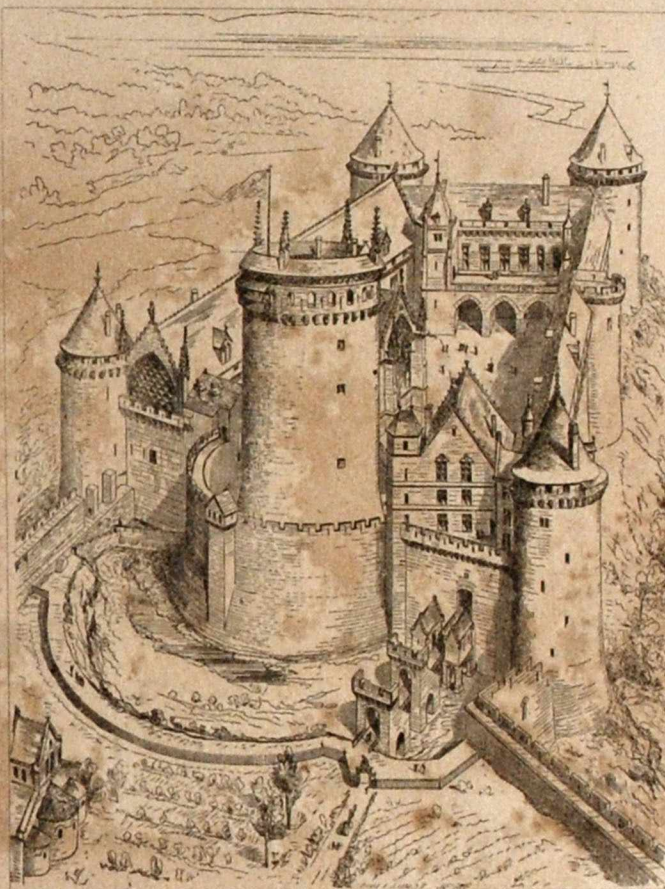
law upon architecture. Structures analogous to those of the warrior nations of Chaldea and Assyria reappeared. As formerly at Khorsabad, serfs and enslaved peoples erected fortified residences for proud and rapacious overlords.

This military architecture comprises two principal themes, moreover often found combined : the fortification of the entire city and of the residence. Although the science of attack and defence had not markedly progressed since the classical period, the enclosure and the castle underwent a complete transformation. The latter, like the cathedral, rose boldly skyward and shot upward its slender turrets capped by sharp roofings.

Taken singly, the castle is practically a city in itself; it has its means of subsistence, its enclosure armed with towers, its residence quarters and retreat, called donjon, which could hold at bay an enemy already master of the fortress.

At first, the enclosure was almost always independent of the inhabited parts of the castle; these, like ordinary dwellings, were grouped at a certain distance from the walls, at the foot of the donjon. Later came the idea of utilising these dwellings as a means of defence, and of methodically planning the fortification of the whole group. The buildings were then ranged around the court, and forming a rampart, presented their solid exterior walls to the enemy. This was the plan followed at the celebrated castles of Coucy and Pierrefonds, the masterpieces of French military architecture.

The castle of Coucy, dating from the reign of St-Louis, stands on the spur of a hill lengthened and raised like the prow of a ship. The lines of the ground-plan form an irregular trapezoid, with four large, round towers in the angles, joined to one another by four massive buildings. In these were barracks, halls serving for the meetings of chiefs and of the tribunal, festival and banqueting halls and the jail. A few structures project into the inner court and formerly comprised dwelling quarters and a chapel.



THE CASTLE OF COUCY

From the restoration by Viollet-Le-Duc

CHAPTER III

MODERN TIMES

CENTRALISATION IN LARGE STATES

WHILE Rome becomes for a time the religious capital of the world another kind of centralisation, political, economic and intellectual, takes place in mediaeval Europe and is also reflected in the development of architecture. The great modern States are forming.

In France the evolution of this political and social life is particularly precocious and striking. The history of French architecture faithfully reflects its course. At first divided into a thousand rival domains, France gradually moves towards unity, and finally ends by having only one head and one capital. The fortified castles of the Middle Ages are succeeded by a single royal palace, which no longer needs to be a fortress, and is made more and more magnificent by the growing power of the monarch.

I

THE FEUDAL FORTRESS IN FRANCE COUCY AND PIERREFONDS

The parcelling out of authority and the perpetual menace of war or riot, transform the appearance of large buildings and impose new tasks upon the architect. The town and the manor are surrounded by walls and towers.

Internal peace came to end in France and Occidental Europe with the fall of the Roman Empire. The invasion of the barbarians ushered in a period of disorder and misery which lasted several centuries. No city felt sure of the morrow without a girdle of towers; no lord was master upon his own estates unless he could defy his rivals from behind solid walls. These miserable conditions, which were like a momentary return to barbarism, imposed their

church, castle and barracks, has crowded and huddled itself within a narrow belt of walls. The donjon, less crushing than at Coucy, is a square building crowned with four lanterns in the four corners. It not only served as last refuge for the lord, but as his dwelling. In all parts of the structure, moreover, defence is no longer the sole concern : the fortress tends to become more livable; the formidable military walls and their towers really screen a palace.

II

THE RENAISSANCE IN FRANCE. — THE CASTLE OF CHAMBORD

The political unity of France is formed in the time of the Renaissance. The royal power, having no rivals throughout the land, can centralise all the activities and all the resources of the nation. New monumental creations correspond to this new social state.

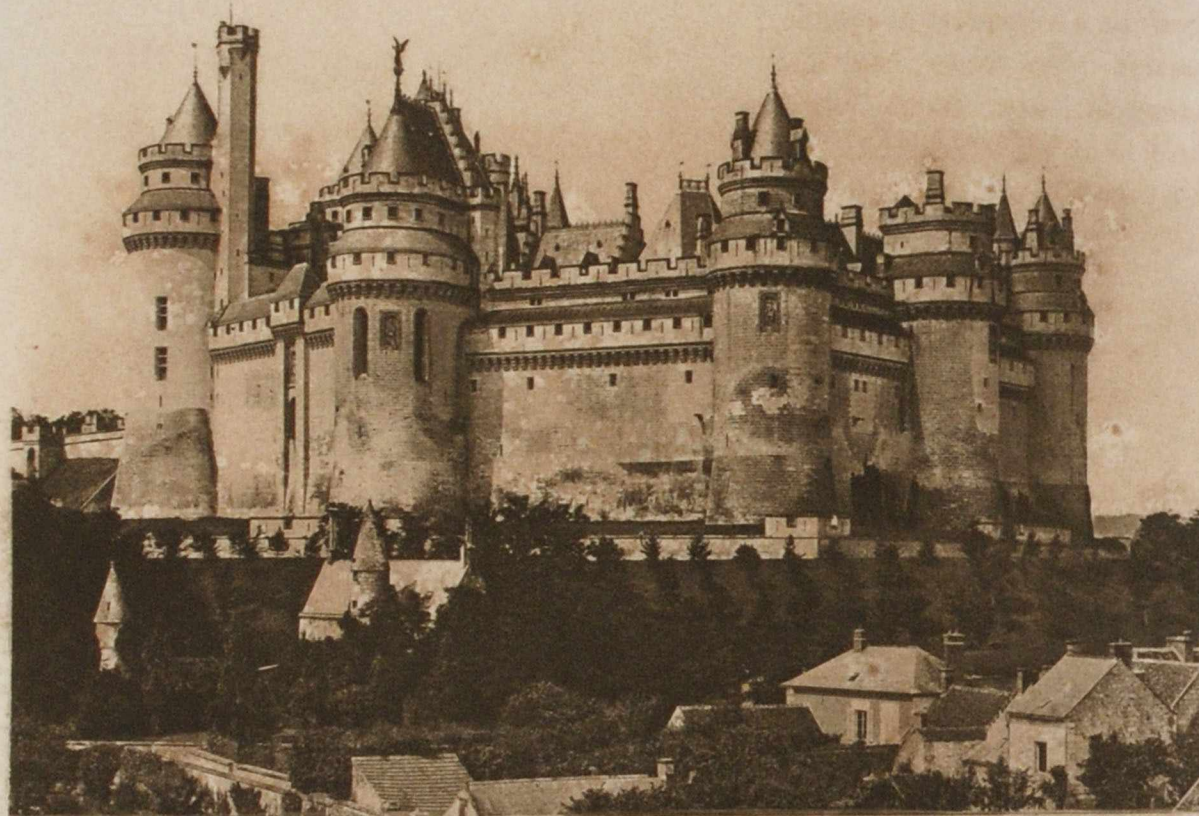
Mediaeval architecture erected fortresses. That of the Renaissance produced palaces. In such mediaeval castles as Coucy and Pierrefonds, the means of defence so predominate as to crush all else. In those of the Renaissance they are only a memory, a traditional motive of which the very reason is almost forgotten. Everything is now arranged for well-being, for comfort and to give joy to the eyes. If towers and moats survive, they no longer cramp the palace. They only bear witness to the national character of this architecture and to the historic bond which links it to earlier times.

This is one of the most striking examples of an architectural transformation resulting from a change in the political and social order. At least relative peace, established in the kingdom, results in a new manner of building. The castle is relieved of its heavy armour of blind walls and towers. It is brought down from the summits to which the need of protection had driven it; large windows are opened upon the outer world, and all the resources formerly spent upon war and defence are henceforth lavished upon adornment.

The epoch of this transformation is that in which Italy is abruptly revealed to France; it is also that of the concentration of power in the hands of one master, which puts very considerable means at the disposal of builders. Since the fall of the great empires of Rome and of Byzantium, no princes undertook such vast and imposing enterprises as those to which the kings of France have left their name. In the Middle Ages art served religion or the lord of the land. Henceforth it is at the service of kings. The period here beginning ends only with the French Revolution. The building of the castle of Chambord is the initial date. The Palaces at Versailles show the culmination of this royal architecture and the highest point of its ambitions.

It is curious to compare the ground-plan of Chambord with its elevation.

The whole group is dominated by a donjon of wonderful strength and simplicity : an enormous, round tower, sixty four metres in height by thirty one in width, which is isolated from everything by a moat of unusual depth, dug in the very courtyard of the castle. To allow of further resistance, in case the first lines of fortification were taken, it had its own well and baking oven, and formed a fortress within a fortress. The top terrace, so arranged as to



THE CASTLE OF PIERREFONDS

crush assailants under a storm of projectiles, could hold fifteen hundred men. The giant tower rises proudly above the neighbouring structures, like a high ornament in the midst of a crown. This admirable group, in which everything has been combined for warfare, has the finest sky-line ever designed by any architect.

At Pierrefonds, constructed under Charles VI, the plan is vaster and more complex, and shows a greater effort in its composition. The rectangular enclosure, armed with three high towers upon each face, is formed, as at Coucy, by the annexed dwellings. Its height is especially striking; the entire edifice, already raised upon a steeply sloping hill, rises tall and straight towards heaven, like a single and enormous tower.

The lordly habitation with its private apartments and festival halls, here reaches its richest development. The whole group produces the impression of an entire city which has sought refuge and, with all its usual buildings,

gling art with their pleasures. Chroniclers of the time do not abound who describe the royal amusements, the great hunting parties and rides accompanied by the sound of the horn, the fantastic banquets and dazzling nocturnal feasts. To serve as a frame to such brilliant pictures, the French architects created the castle of the Renaissance with its fairylike and sumptuous style.

After the completion of Chambord, their renown equalled that of Italian builders. When Charles V traversed France to put down the Flemish rebellion, Francis I received him at Chambord. The emperor wrote that such a building was "an epitome of all that human industry can create".

III

THE LOUVRE AND THE TUILERIES

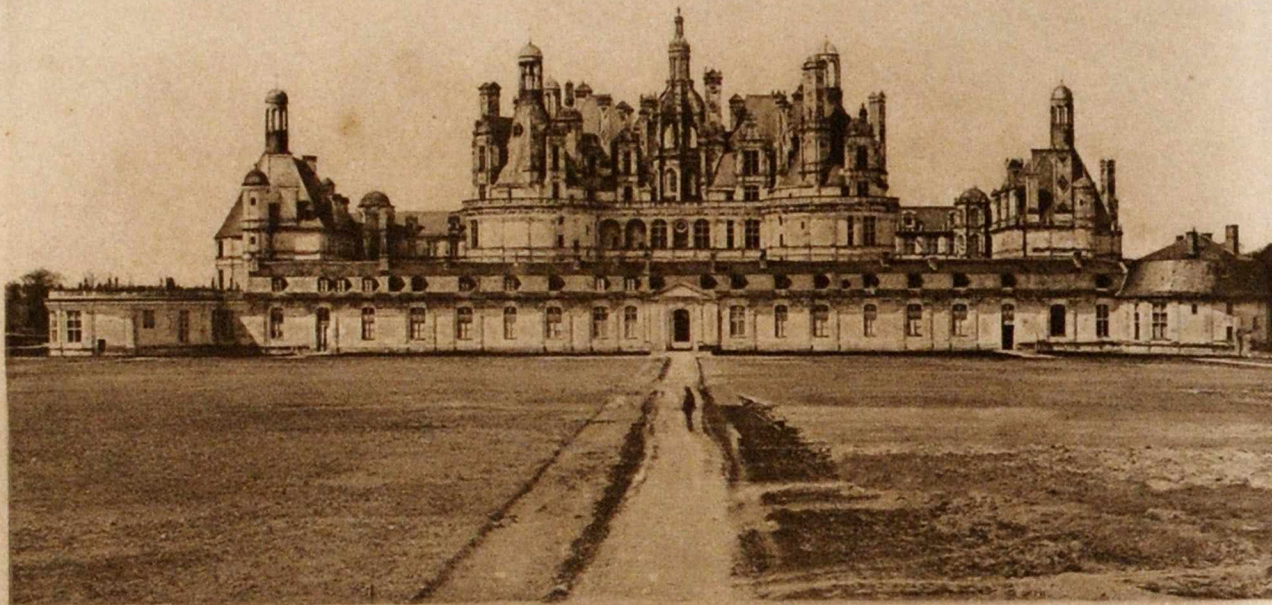
This architectural group, of which the construction is carried on through centuries, is the faithful witness of the social transformations of France. At its origin it is a plain, fortified bastion. Monarchic centralisation turns it into a palace for pleasure and state, indeed into a whole group of palaces. As the power of the kingdom increases through conquest, it is enlarged and enriched. After the Revolution, it ceases to be the palace of a prince and his court, and becomes the National Museum into which all the artistic treasures of the state are gathered.

The Palace of the Louvre as it now stands is the work of three centuries. Like a great living organism it developed gradually at the same time as the society of which Paris formed the centre. It became quite other, and infinitely larger than its founder had intended. In spite of its slow growth and of the many, often contradictory wills that directed it, this palace forms an intimately connected whole. The plan has not the rigorous symmetry of a great group designed by a single master, but the more complex unity acquired by works long drawn out, to which generations through centuries bring each a stone. Like a city whose prosperity forces it to spread, or an empire which from age to age moves back its boundaries, we have already seen a few buildings thus slowly develop. The great Temple of Ammon at Karnak grew during nearly twenty centuries. The Mosque at Cordova increased its size fivefold during the years of construction, which lasted throughout the whole time of the Arabian domination. In modern architecture the Louvre is the most curious example of the same kind.

The purpose of this building has varied no less than its shape and appearance. It began by being a fortress, a bastion in the walls of Paris; in the 16th century, it became a palace of pleasure and of state. In the 19th century a final transformation turned this royal house into a National Museum, the greatest of all, in which are collected the artistic riches of France. These three

The two drawings show an entirely different character. The ground-plan seems a military construction of the feudal epoch, made solely for defence.

In elevation the building in no wise resembles a fortress; it is but a splendid residence for pleasure and state. Compared with the palaces of Italy, the originality of the style consists in the proportions given to the roof, and in the ornamentation with which it is adorned. The three stories of windows



THE CASTLE OF CHAMBORD

and galleries seem only an accessory; they form a terrace from which colossal chimneys, open-work belfries, sculptured piers and sharp spires spring up like sheaves of stone. This magnificent crowning is higher than the façade itself. French churches of the Middle Ages had already shown us this tendency of mediaeval architects to develop vertical motives to the greatest extreme. With an entirely different decorative style, this same trait recurs in the French castles of the Renaissance. As boldly as a cathedral nave, the edifice springs skyward, and its roof seems flaming. Only the towers, here and there, show blind walls. On the whole, the building is profusely lighted. Nothing more recalls the need of defence; the demand for light and air pierced the walls. Through the vast halls illumined by windows, the pomp of royal entertainments could pass in light.

Such as it is, Chambord is a true expression, in architectural language, of a society and of an epoch. The reign of Francis I was a glorious and a joyful moment for the court of France. The young royalty had no more enemies to fear; the nobility accepted its supremacy in exchange for the magnificent leisure given by the king's munificence. External wars and the discovery of Italy gave the French a taste for refined culture as well as the need of min-

between the several orders, and by the richness of the sculptural decoration. As in Chambord, the chimneys, gutters and tubings of gilded lead are of a luxury unknown in Italian architecture. In the reign of Henri II, no longer content with carrying on the North-west and Southern wings, additions to the plan drawn by Lescot were begun.

The construction of the two wings, to the East and to the North, which



PARIS. — THE COURT OF THE LOUVRE

were to enclose the square court, was postponed. But upon the outside, West of the quadrilateral, the large King's Pavilion was added. Later this pavilion was attached to Lescot's Louvre by a gallery running by the edge of the Seine, and bordered with gardens forming a terrace above the river. From that day it seems that a great plan was studied for the purpose of uniting the Louvre to the newly built Château of the Tuileries.

The work planned by Lescot and the buildings around the square court were not finished until the 17th century. Louis XIII's architect, Lemercier, took charge of the works, and he enlarged the court to four times its original size by exactly doubling the intended length of the wings. He respected the two wings built by Lescot but lengthened them, which did not fail to alter their character. To him also is due the idea of the big pavilions that fill the centre of each wing. The first to rise was the Pavillon de l'Horloge, which in Lescot's plan formed a corner, but in Lemercier's enlargement became a middle pavilion. At about the same time, the North wing began to appear above the ground.

periods of its history correspond to the three successive stages of modern society. The Louvre, situated in the capital, and in the heart of the country, followed the vicissitudes of the State. It shows us how architecture has adapted itself to the needs of each epoch. In the Middle Ages, its whole resources were employed for military ends; in the Renaissance, it embellished the royal residence. In the 19th century, the palace created for a prince became a city of the Fine-Arts.

The early history of the Louvre is enveloped in obscurity. The first certain date is that of the year 1204, in which the celebrated Tour du Louvre was built by Philippe Auguste. As it was called the New Tower, there is little doubt but that it was added to a fortress already standing.

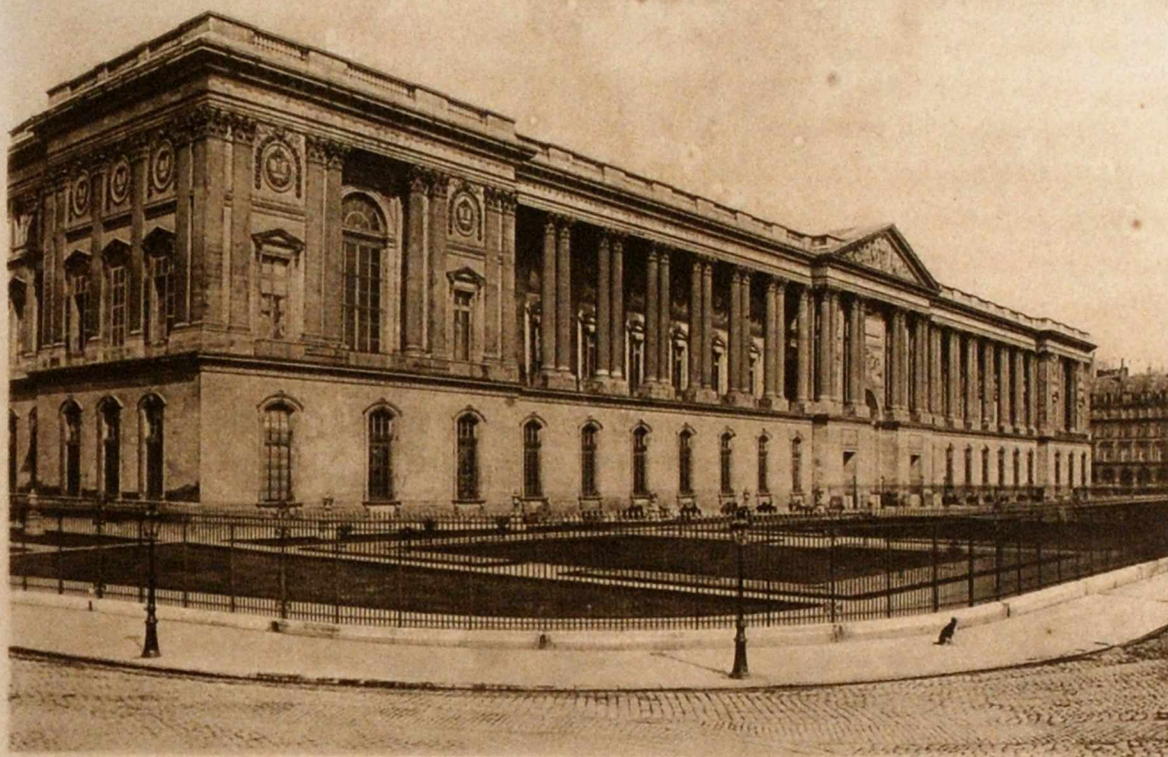
As early as the reign of Charles V the building began to lose the character and appearance of a fortress. The walls of Paris having been enlarged on all sides, it was left on the inside and no longer played the part of an advanced bastion. Then it was that successive changes adapted it, little by little, to the new purpose of a royal residence. Charles V entrusted the first changes to his master of the works, Raymond du Temple, who raised all the buildings forming the enclosure of the castle one story. Quite a large garden was drawn on the West, the first royal garden planted in Paris.

During the reign of François I, as the Emperor Charles V, journeying through France, was to stop at Paris, it was decided to receive him in the Louvre. The exterior façades and those of the central court, which, the king thought were of a mean appearance, were hastily decorated. They were covered with draperies and added ornaments. Sculptures in wood completed the decoration of the portals and of the state drawing-rooms. But François I blushed to receive his guest in so modest a house. After the emperor's visit to Chambord the old Louvre of Philippe Auguste must have seemed to him unworthy of French royalty. From that day it was condemned and a plan of complete reconstruction was studied.

The undertaking was first entrusted to an Italian architect, Serlio. But shortly after, the king adopted the plan of a Frenchman, Pierre Lescot, which was immediately begun. Instead of the round towers of the Louvre of the time of Charles V, four large, square, slightly projecting pavilions were to be placed upon the corners of the new palace. This arrangement afterwards prevailed in the several plans executed for the carrying on of the works, but in the present buildings almost nothing remains of the pavilions drawn by Lescot. The Southern half of the façade of the Clock, on the interior of the square court, is, however, his authentic work, decorated with sculptures by Jean Goujon and Paul Ponce. Lescot frankly adopted the type of the high roof. Like most French architects of the Renaissance, he reserved the greatest luxury of decoration for the top of the building. The first two stories are in quite a simple style, with arcades and windows framed in a Corinthian order. The handsome effect of the ensemble is obtained by the just proportions prevailing

tico corresponded so well to the taste of the century, that it became a favourite and was many times copied. We find it again in the buildings on the Place Vendome and in the two palaces which, on either side of the Rue Royale, form a background to the Place de la Concorde.

The difficulty was to harmonise the new wing with the two façades on



PARIS. — THE COLONNADE OF THE LOUVRE

the North and the South; also the buildings which back onto the colonnade and face the court were still to be built. In this second part of his task, Perrault was but poorly supported by the king, whose whole attention was now concentrated upon the palace at Versailles. Money was given him grudgingly; the work dragged and time to finish it failed.

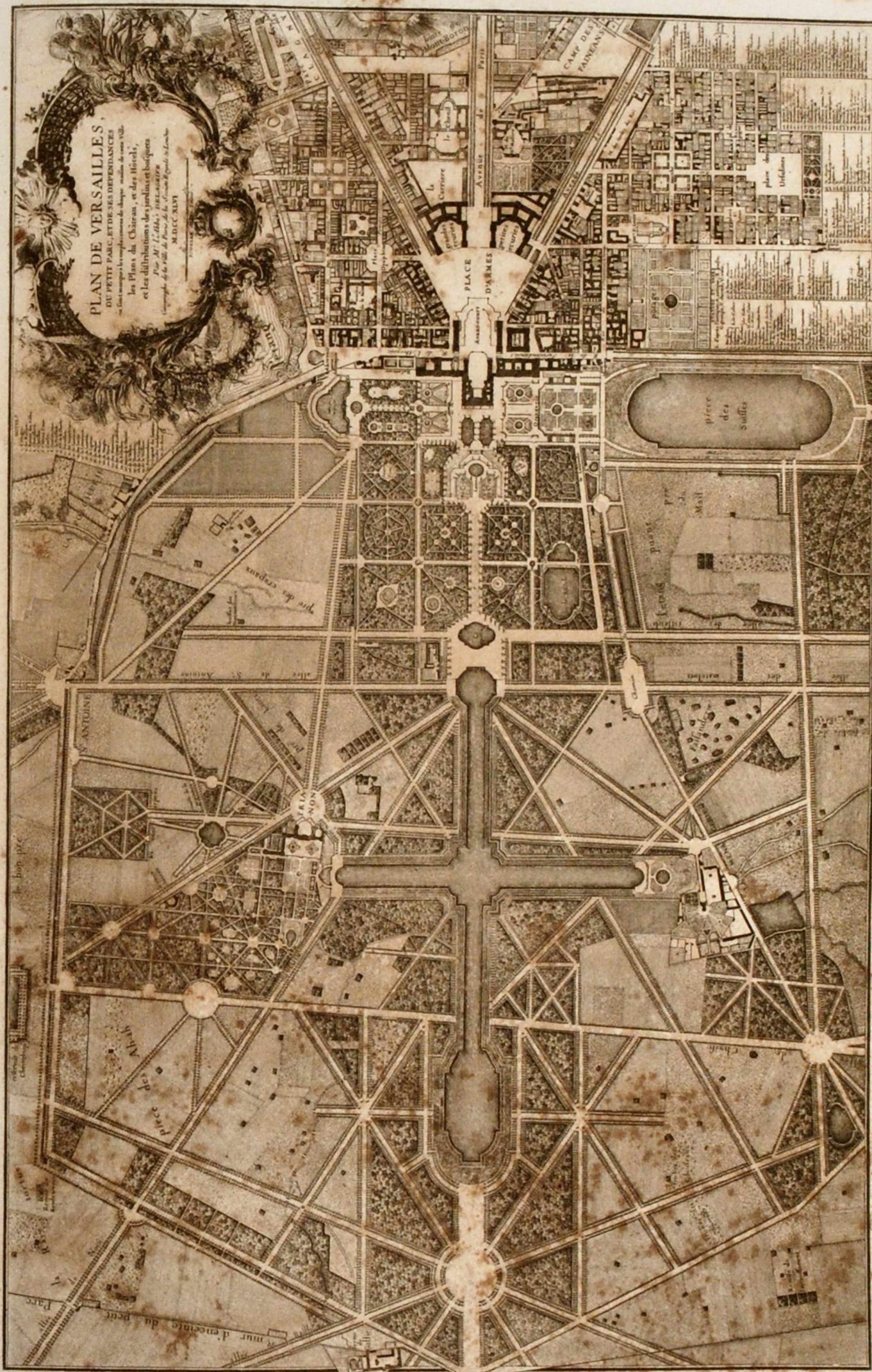
Only in 1774 was the architect Gabriel given the order by the Superintendent de Marigny, to finish the court of the Louvre and to clean up the surroundings. At the time of the death of Louis XV, this work was still far from being completed. Interrupted under Louis XVI, it was not taken up again until the first Empire. Napoleon had the merit of returning to the old project, so long postponed, of connecting the Louvre with the Tuileries, but Percier and Fontaine, to whom he entrusted the work, presented their plan only in 1813.

From 1815 till the reign of Louis Philippe, the works were completely forsaken. In 1833, Thiers brought to the Chamber a law which, among other things, included the connection of the two palaces. He was refused

The reign of Louis XIV saw no great modification to the plan in execution, but an accentuation of the disagreement between the styles of the several parts of the palace. At first the architect Levau continued the North wing, and began the Southern one in accordance with Lemercier's plan. On the court, he copied Lescot's façades more or less faithfully, but to satisfy the taste of the time, he applied six Corinthian columns to this central pavilion on the side of the Seine.

In 1663 the East wing, facing the church of St-Germain l'Auxerrois, was still to be built. Changes brought to the adjacent quarters, gave this part of the palace an importance which had not been foreseen in the original plan. This East wing was called upon to serve as façade to the whole great edifice. Its central pavilion was to be the principal entrance to the great court. Levau's drawings, in which it was conceived in the same style as the Northern wing, did not please Louis XIV. A competition was organised. Among the plans presented, one by a Parisian doctor, Claude Perrault, was immediately noticed, but the judges gave none of the competitors a sufficient majority. Then it was that Colbert wrote to the painter Poussin at Rome, and submitted to him the results of the competition. Poussin, whose taste in architecture was not faultless, criticised all the plans and dissuaded Colbert from having any of them executed. He returned them all, and at the same time sent others, done under his own direction; these, however, had but the feeblest success before the king. From that moment, Colbert confessed his preference for Perrault's project, and spoke of having it carried out. But Cardinal Chigi, told of the indecision of the king and his minister, counselled their sending to Rome for his compatriot Bernini, the most celebrated architect of the time. A personal letter from Louis XIV decided the Italian master to take charge of the completion of the Louvre. A few months later he presented quite a handsome plan which, though it pleased the king but moderately, was accepted. But soon everything was again thrown into uncertainty by an illness which obliged Bernini to leave France, without hope of return. This was the moment at which Perrault reappeared, and his plan, defended by Colbert, was finally accepted by the king. The first stone of the new building was laid in October 1667; the year 1670 saw the completion of the long façade that finally closed in the quadrilateral.

Perrault's work has been variously judged. It is not without both grandeur and coldness. The arrangement of the other façades is substituted by a long portico of Corinthian columns in couples, raised upon a base to the height of a first story. Three pavilions interrupt this somewhat monotonous line. The central one, where opens the principal entrance, is crowned by a pediment. Everywhere else there runs a terrace with a balustrade in the Italian style. Both the qualities and the defects of this work are very characteristic of the epoch and introduce a specimen of the Louis XIV style into the incongruous group which the Louvre had now become. This magnificent por-



the 100 millions he thought necessary. A similar attempt, of which the honour is due to Count Jaubert, was no more successful in 1843. The decrees of the provisional government of 1848, and of the President of the Republic, in 1852, finally assured the completion of the great group already projected by Catherine de Medicis.

IV

VERSAILLES

French monarchy, having reached the height of power, finds the Palace of the Louvre too small for its needs, and establishes another still more magnificent royal residence. As long as royalty extends its influence by conquest, Versailles is enlarged and enriched.

Versailles consists of a Château, a park and a city. This group, of which the three parts are intimately bound, was born of the will of one man. Unlike the Louvre, it did not grow slowly and without foreknowledge. From the very first, its creator gave it definite features and its present dimensions. For this reason in particular it deserves our attention.

One may not admire the cold and solemn style of this architecture, one may even dispute its originality. Nevertheless, the fact remains that such an undertaking stands alone in history. Never did so vast a palace rise from the soil in so short a time; never did art thus transform so great an area of nature into a pleasure-garden and a magnificent landscape; never did city with such docility fill the space and take on the form assigned to it. Other works may have been more beautiful, but in all the splendours of architecture, none has borne witness to a greater will to create.

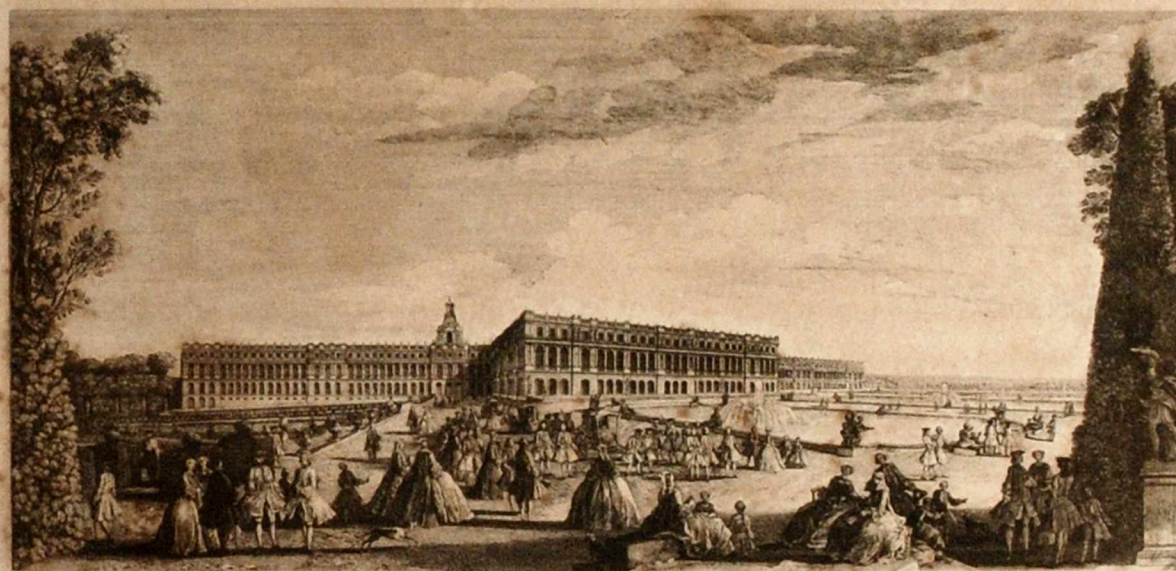
Louis XIII had built quite a simple Château at Versailles to serve for his hunting parties. He had needed a halting place in this country, rich in game, where the royal train was often delayed at too great a distance from the Château of St Germain. A hillock crowned by a windmill, was chosen to build upon. From thence the gaze embraced a wide and calm horizon of woods and meadows. At only a short distance in the rear, there vegetated a poor and unknown village. This it was that gave its name to the castle.

The appearance of this first structure is known from a few old engravings. It was a two storied house, surrounding on three sides a little square court. Four pavilions stood in the corners; upon the entrance side, the court was closed by a simple row of arcades. A deep moat and a drawbridge gave this castle the air of a fortress. The taste of the time was seen in the mingling of brick and of stone, and in the shape of the tall roofs pierced by high and dormer windows. In spite of later alterations, the appearance of this structure, of pure French style, was retained for the façades which to-day frame the

failing the brilliant actions of war, nothing shows the greatness and intelligence of princes better than buildings; all posterity gauges them by the measure of the superb houses which they have built during their life-time. Ah! how great were the pity if the greatest of Kings and the most virtuous, with the true virtue which makes great princes, were gauged by the measure of Versailles. And yet there is reason to fear this misfortune!" Colbert was



VERSAILLES. — THE ENTRANCE FAÇADE



VERSAILLES. — FAÇADE LOOKING INTO THE GARDENS

not mistaken; the name of Louis XIV is for ever associated with that of Versailles. But this, in the eyes of posterity, is not his least merit. Versailles is the best witness of the degree of grandeur to which he lifted French Royalty.

As early as 1669 the king chose Versailles as his residence. Therefore it became necessary to enlarge and constantly to extend the modest house of Louis XIII. The architects proposed to tear down everything. The king was fond of the old buildings of the Marble Court, and, as they threatened to fall, he preferred to repair them at great cost rather than to allow them to be demo-

little Marble Court. About this kernel grew the immense palace of Louis XIV. There was as yet no question of either park or city.

THE CHATEAU OF LOUIS XIV

Still a child, Louis XIV was taken to Versailles. Memories of childhood were the bonds which in later life attached him so strongly to the place.

As early as 1661, the year in which the king came of age, the works were begun. During a half century, incessantly, the modest house of Louis XIII was enlarged and embellished, even to the limits of the resources of France. The first alterations made to the original plan scarcely changed the simple character and style of the old dwelling. Until 1668, principally the interior of the château was enriched. Two symmetrical buildings were added to lengthen the two wings, in the front of the square court. Wrought iron ornaments, gilded sconces and marble busts were brought to enliven the somewhat bare appearance of the façades. Finally, and this was the chief work of this period, the garden was created. In a view of the Château dating from 1668, flower-beds bordered with statues can be seen in the distance in front of the Western façade, then a wide basin from which spring jets of water, then, in the axis of the building, a broad avenue stretching as far as eye can reach.

Intending to build a magnificent dwelling, Louis XIV certainly took as model the Château of Vaux, property of the Superintendent Fouquet. Moreover profiting by Fouquet's disgrace, he attracted to Versailles all the artists who had contributed towards making Vaux a perfect masterpiece. This Château, which has been but too little praised, by its architecture as well as by its interior decoration and the style of its gardens, already foretells that which will be yet better in the art of Versailles. It is the work of three masters, soon afterwards to be found in the service of Louis XIV : the architect Louis Le Vau; the landscape gardener André Le Nôtre; the painter Charles Lebrun.

At Fouquet's, Lebrun had charge not only of the ornamentation of the Château apartments, but also of the decorations for those festivals which were the Superintendent's glory and his ruin. It was for this same purpose that Louis XIV first engaged him. During the early years of the reign, all the money already lavished upon Versailles was spent for pleasure rather than upon durable works. The king had not yet acquired the taste, nay passion, for buildings, which later inclined him to commit so many magnificent follies, of which he repented upon his death-bed. Curiously, it was Colbert who, while reproaching the king for his extravagance, suggested that the money spent might at least add to his glory if consecrated to beautiful buildings. The courageous letter in which the minister invites the king to turn from the fêtes at Versailles and finish the Louvre is known : " Your majesty knows that,

Like Le Vau, Mansart had vainly asked the king to allow the destruction of the old Louis XIII Château. He was obliged to content himself with harmonising its appearance with that of neighbouring constructions by raising it and by lavishing ornamentation upon its walls. On the garden side, the Italian castle built by Le Vau was completely altered. The façade was widened by the addition of two great wings, and spread out in a straight line, without receding in the centre. The rusticated ground-floor kept its original appearance. The entire length of the floor of state was lighted by high, arched windows, framed between pilasters. Above this a second story, occupied by rooms for the service, formed a continuous attic supporting an open-work balustrade. From this last spring great trophies and stone vases, the outlines of which, cutting against the sky, make the happiest contrast with the severe lines of the edifice.

Three reception rooms spread out behind the great façade upon the garden side; at the extremities are two large square rooms : the *Salons of Peace and of War*, in the centre, the immense *Gallery of Mirrors*, of which the cradle-shaped ceiling is entirely covered with paintings by Lebrun. The incomparable luxury of this decoration would be almost a weariness to the mind if it did not, in the language of form and of colour, truly express the proud power and unparalleled prodigality of this triumphant monarchy, intoxicated by riches and success.

THE GARDENS

Like the castle, the gardens of Versailles were developed gradually, and were also the work of the king, admirably served by Le Nôtre and Mansart.

Le Nôtre drew the big lines of the general plan at the same time as Le Vau raised his façade. In front of the new palace a large flower-bed of *embroideries* was spread out and supported by a terrace in the shape of a half-moon. From thence a broad prospect reaches to the horizon. In the foreground runs the wide alley which was later turned into the Royal Alley or *Green Carpet*, then comes a basin, *le grand Rondeau*, the future "Basin of Apollo", further on, the grand canal, a memory of Holland or Venice, stretches amid lines of verdure as far as eye can reach. To right and left of this long opening which produces a sense of the unlimited, two principal alleys stretch obliquely from the castle, in the shape of a fan. Such is the original theme, each year embroidered with new motives by the king's fantasy.

In 1664, two symmetrical gardens were added in front of the wings of the palace, to right and left of the great flower-bed. In 1665, the ground beneath it was dug and hollowed, and the tubing was prepared for a great basin, the future Basin of Latona. The king desired to place fountains everywhere. Powerful machines raised water from the Lake of Clagny to reservoirs from which it could be distributed to all parts of the garden. The cele-

lished. On the whole, Le Vau did the best he could with the difficult task assigned to him. Upon the city side, where the Château Louis XIII still survived, he harmonised with this the constructions that were being grouped in the neighbourhood. Here rose brick buildings, which embraced the vast entrance court between two long wings. Upon the garden side, where the new structures were completely to mask and dissimulate the old castle, Le Vau frankly adopted another style. He built in the Italian manner and eliminated high, pointed roofs, overcharged with open-work chimneys, towers and slender pavilions. He erected noble façades, consisting of a rusticated ground-floor and of a high story with columns, crowned by a gallery.

Le Vau died in 1670, leaving sufficiently complete plans to enable the work to be carried on after him. His pupil, Dorbay, quickly finished the masonry, which alone swallowed up the sum of 1 350 000 pounds. Hardly had this first transformation of the castle been completed, when the king decided upon a yet more radical change. On the morrow of the Peace of Nimegue, in 1678, Versailles ceased being a pleasure palace only, and became truly the seat of French Monarchy. The whole government moved hither, and with it a large population of courtiers. Within a few years an entire city had to rise from the ground. Then were drawn the great radiating avenues which start from the castle, between which mansions were built. But the newcomers, to say nothing of the servants of the State could not all be built for, and many private persons had to be lodged in the castle. Hence the necessity of yet further enlarging the plan conceived by Le Vau.

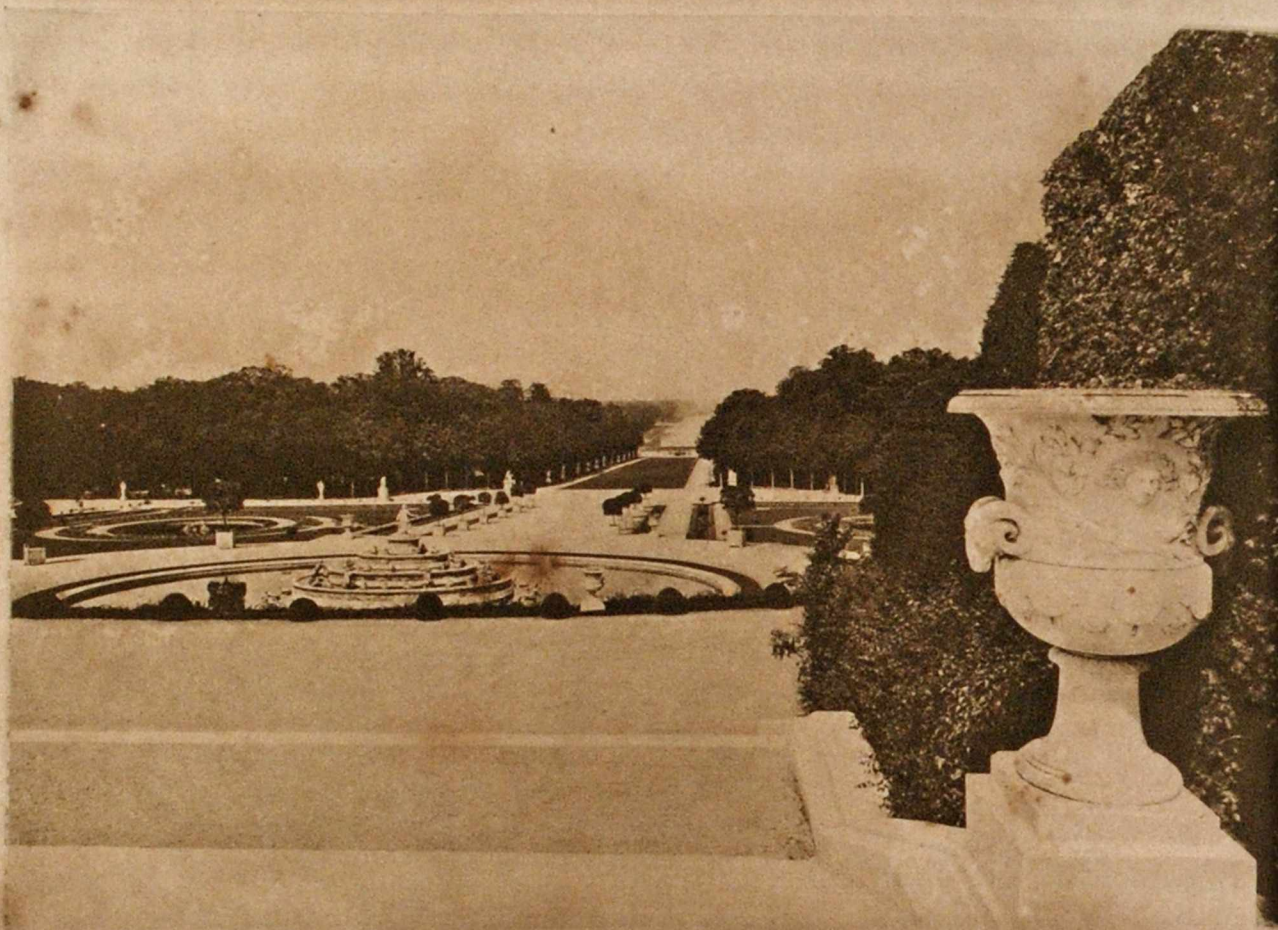
During more than thirty years the direction of the works remained entrusted to Jules Hardouin Mansart. But those signed by this architect were only partly due to his merit, great though this was. The king, a febrile, imperious, often genial collaborator, was continually beside him. The royal correspondance, and plans and estimates annotated by the sovereign, show how minute a care and how great a passion he brought to overseeing his undertakings. The expenses, though colossal, were carefully thought out and registered. The haste to come to an end was such, that at times over 36 000 men laboured in the immense work-yards. The marshes, which had to be drained, formed the worst obstacle. At the time of the greatest activity, in 1678, a sudden epidemic, a kind of pest, broke out. "Every night, wrote Madame de Sévigné, waggon-loads of dead were carried away from the work-yards." Nevertheless the work was carried on in all directions at once. The park was laid out, planted and decorated with basins and fountains. The castle was enlarged by the addition of two great rooms and thousands of annexed buildings, commons, kitchens, stables, etc. The present city was created whole within a few years. By 1682 the third and last transformation of Versailles had taken place. French Monarchy was installed in a palace worthy of itself, and from which it was to be driven out only by the Revolution.

running dry, in spite of the sea-like reservoirs which had cost so many millions to build. This defect became the ruin of the infantry. M^{me} de Maintenon reigned; M. de Louvois was upon good terms with her; peace was enjoyed. It occurred to him to turn aside the River Eure between Chartres and Maintenon, and let it serve wholly for Versailles. Who can say the amount of gold and of men that this attempt cost in a few years? Finally in 1688, war interrupted these works, which were never afterwards taken up again; only shapeless monuments remain which will eternalise this cruel folly."

In describing the Palace at Versailles, and the Gardens created by Le Nôtre, we have repeatedly spoken of façades and flower-beds in the *Italian style*. Indeed, this French architecture of the 17th century is thoroughly impregnated with this influence. It did not create a style of its own. Or at least, if the works of the time are analysed, no new elements are discoverable. The French garden borrows its motives, traceries and architectural combinations from the gardens of Roman villas. The façades of these same edifices already show us the ordonnances dear to the time of Louis XIV. Nevertheless, all these borrowed motives concur in producing a new impression. Even as the builders of to-day know how to remain modern while using ancient orders, Mansart and Le Nôtre produced a French work while copying Italian models. Such as they are, and in spite of their Italian style, the Park and Palace at Versailles express the character of French Monarchy at its height better than any other architectural group. The strong personality of the prince left its impress upon all the productions of his time. The architects of Versailles adapted the Italian style to the taste of a monarch and of a court enamoured with splendour and magnificence. The façades by Le Vau and Mansart, with their long rows of columns and pilasters, their well knit proportions and their sober lines, have a noble severity unknown in the Italian palaces. The gardens by Le Nôtre bear traces of the same spirit. The Roman villas offer more varied aspects, they are framed in richer landscapes and stand out against admirable backgrounds. But does not the flat and monotonous horizon add to the impression of solemn grandeur produced by the whole group at Versailles? The gaze soars above the sheets of the Water-bed and loses itself in the depths of the long alleys, which with their walls of verdure seem to prolong themselves into infinity. To the enchantment of the prospect, is added the sense of might and of immensity. The king's desire for magnificence, communicated to his artists, did not miss its aim. Greater beauty may have been attained in the palaces and gardens of Italy, but never greater grandeur.

brated Grotto of Thetis, an artificial rockery peopled with admirable statues, was completed in the shades of the park. Finally, apart in a frame of verdure, a miniature of the large palace was erected : the Trianon.

After 1671 the appearance of the great terrace in front of the palace was completely altered. The former lawns and flower-beds were replaced by basins, and were henceforth called the *Water-bed*. The luminous width of



VERSAILLES. — VIEW OF THE GARDENS AND THE GRAND CANAL

these great, calm sheets, motionless as mirrors or enlivened by liquid sheaves, is in perfect harmony with the majesty of the façades. Here and there on the edge of the basins, lie the soft forms of recumbent statues; in the centre, other figures are grouped at the foot of the water jets, amid tritons and shells.

From the moment that this frenzy for fountains took possession of the king, all the French sculptors worked for the Gardens of Versailles. Lebrun rapidly sketched the design of the whole; sculptors modelled provisional plaster figures, to be put in place that the king might judge of the effect. According to his pleasure or dissatisfaction, these were cast in bronze or destroyed. Within a few years the architecture of these fountains was enlivened by a whole population of ocean divinities, nymphs and children.

These constantly changing fancies, it is true, were costly to the whole of France. "These marvels of art", wrote St Simon, "were continually

grown. In this respect the castle and park at Versailles mark a great step in advance of the works of the preceding centuries. The same may be said of the fine group of the Louvre, the Tuileries, the Place de la Concorde and the Champs Élysées in the heart of Paris. But the most curious example of a modern city, drawn by one architect, conceived as a whole and as a work of art, we find in America, at Washington.

In 1790, Washington, assisted by the French architect, L'Enfant, chose a deserted site on the borders of the Potomac, propitious for the construction of a capital. It was a gently rolling plain bounded on two sides by the river and its tributary, the Anacostia River, on the other two sides by hills. No other such opportunity has occurred to plan at one time a whole great city, and to arrange it entirely for convenience and for beauty. Washington was clever enough not to miss this opportunity. Through his initiative, and by the genius of his architect, the city which bears his name is a work of engineering and of architecture without analogy in history. It shows of what human industry is capable when directed by a firm will and a very sure artistic sense.

THE PLAN OF C.-P. L'ENFANT

All that is noble and beautiful in the city of Washington as it now stands, says Mr Abercrombie, comes from the original plan; every departure from it has resulted in some damage.

L'Enfant did not make a plan for Washington that might have suited any place. His project was made for a capital and would not have done for another town. He conceived the city as a monumental group, built for the functioning of two great centres : the seat of Legislative power and that of the Executive. About these two points, occupied by two magnificent structures, the secondary buildings were to be grouped in their relation to these two forms of authority. From these two centres were to radiate the principal avenues of the city.

The Capitol, as seat of the Legislative Power, was placed upon a height on the axis of a very wide avenue, the Mall. The White House, the seat of the Executive, found a site at the end of a similar avenue which meets the former at right angles. At the intersection of these two axes, an equestrian statue of Washington was to have been erected. A wide diagonal road, Pennsylvania Avenue, connects the White House with the Capitol. Thus the central motive of the plan was a great rectangular triangle : two large buildings would thus have occupied the two extremities, the statue of Washington the angle between. The two avenues descending from the White House to the river were to be the largest open spaces in the city and to afford the most beautiful views. Besides the wide avenues radiating from the two centres, L'Enfant had arran-

CHAPTER IV

CONTEMPORARY EPOCH

THE BEGINNINGS OF WORLD CENTRALISATION

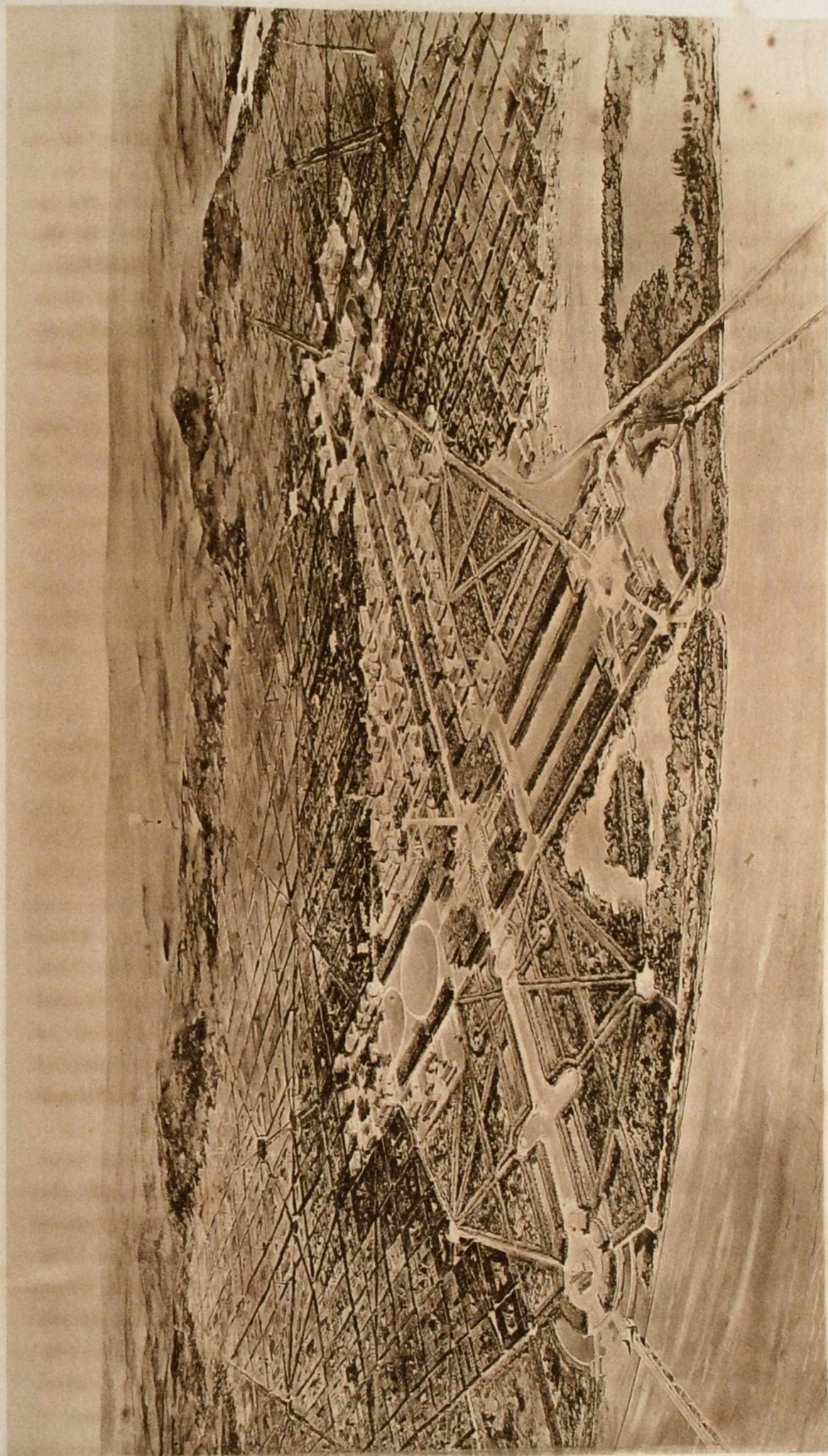
DURING the centralising movement of the 19th century, the appearance and character of the large capitals are modified. They cease being the residence of a monarch to become truly the possession of the entire nation. Less care is given to providing a palace for a prince and his court, than to giving the whole city greater beauty and healthfulness. Paris is an example of a city thus gradually transformed; Washington, of a capital created at a stroke for a great democratic federation of States. In the second half of the 19th century a fact of first importance marked the social and political evolution of the nations. The idea of universal cooperation was not only discussed, but gave positive results and created capitals of a new kind. Centralisation till then national, in the domain of science, industry and art became international. For its organisation, universal exhibitions were created: cities of a splendid but ephemeral character, in which nations periodically unite.

I

WASHINGTON

A capital planned by an artist. — The enlargement of architectural conceptions in America.

We know of a few cities in antiquity entirely built or rebuilt upon a logical and harmonious plan, the work of one man. In the Middle Ages there were no examples of the kind. On the contrary, architectural schemes became narrower. The most beautiful cities grew at hap-hazard without law of art. Buildings were sometimes of colossal dimensions, but the groups never covered very great surfaces. In modern times architectural conceptions have gradually



VUE GÉNÉRALE DE WASHINGTON
D'APRÈS LE PROJET DE LA COMMISSION

ged another great artery, Massachusetts Avenue, in the rear of Pennsylvania Avenue. This road which, unlike the others, leads neither to the White House nor to the Capitol, was especially designed to form squares and circles in places indicated for such by the nature of the ground. This fact shows that L'Enfant's plan was carefully prepared upon the spot.

To the net-work of avenues radiating from the two centres, another closer



and differently systematised net-work was added. This was a simple checker-board of narrower streets all cutting at right angles and running exactly North and South, East and West.

The fine simplicity of this plan has been justly admired, as well as the idea of two wide avenues full of verdure, bordered with monuments, and as Mr Abercrombie says, the proximity of two great edifices, seats of the two powers. The White House and the Capitol are clearly distinguished by their situation, yet by means of the avenues which run from them, they have a symbolic meeting place at the point where the statue of Washington was to stand.

upon the suppression of all the gardens that cut up the promenade and obstruct the view between the Capitol and the Obelisk. The proposed plan allows for only four rows of elm trees upon the sides of the avenue, with a simple band of grass, about a hundred metres wide, in the centre, like the *Green Carpet* at Versailles.

Only the space in front of the Capitol will be occupied by a square. There, amid verdure, will rise monuments to Grant, Sherman, and Sheridan; from this square to the Obelisk the Mall will lie widely open. Everything between the rows of elms will be sacrificed to the view. On the two sides reserved for circulation beyond the trees, public buildings will stand in line.

To remedy the bad placing of the Obelisk, the central avenue will be slightly deviated so as to run directly towards the Monument. This deviation, though visible on paper, will in reality be insignificant because of the considerable dimensions of the avenue. In the direction of the White House, the position of the Obelisk is unfortunately too defective to be remedied by the same device. So as not to mark the intersection of the two avenues by another monument that might rival the one of Washington, the intention is to place a plain, round basin of water where these avenues intersect. A broad flight of marble stairs, as wide as the central alley of the Mall, will descend from the Obelisk to this basin. Surrounding both this and the Washington Monument there will be gardens.

CORRECTIONS AND ADDITIONS TO L'ENFANT'S PROJECT

In a second part of its programme, the commission does not limit itself to restoration, but proposes a very desirable addition to the project. L'Enfant had taken as central motive a rectangular triangle formed by the White House, the Capitol and the Washington Monument. This arrangement has the defect of being unsymmetrical. Pennsylvania Avenue needs a balance on the other side of the Mall.

In the old state of the town, Maryland Avenue badly answered this purpose, as it led to no important Circle and was too quickly stopped short by the Potomac. Thanks to the wide stretches of land gained on the edge of the river, it is now possible to remedy this defect. Maryland Avenue will therefore be pushed on far enough to join the axis of the immense promenade coming from the White House. Instead of L'Enfant's rectangular triangle, the commission plans to build an isosceles triangle, of which the Mall becomes the central line. But upon the dried banks of the Potomac, the Mall itself may be prolonged far beyond the Obelisk. This new section of the avenue is to end in a vast circle on the banks of the river, at which place, on the axis of the Capitol, it is proposed to erect a magnificent monument to Abraham Lincoln. This monument will end the perspective

PARTIAL ABANDONMENT OF L'ENFANT'S PLAN AND A RECENT
RETURN TO IT

The handsome plan just described was conceived towards 1800. In the first years of the 19th century, L'Enfant's successors followed it quite faithfully. The two principal buildings were indeed built on the site assigned to them and in a style appropriate to their situation. Space for flower-beds and long lines of trees was carefully reserved on the land that L'Enfant had designated for the long avenues.

Then followed a period when the builders seemed completely to lose sight of the original plan. A few years sufficed to compromise work of which the French architect had laid the foundations. The splendid avenue of the Mall was treated as a simple space enclosed by chance in the centre of the town. No care was taken to leave its long view free, and still less to reserve it for handsome constructions. Private houses and gardens were allowed to grow up in the very centre of the avenue. It seems almost incredible that a railroad company was authorised to lay tracks across the Mall and to build a station on the side.

But this is not all. In 1900 it was decided in order to leave the level free, to build an elevated railroad upon a viaduct 160 feet above the ground. An obelisk, the Washington Monument, instead of an equestrian statue which L'Enfant had intended to place at the juncture of the two great avenues on the borders of the Potomac, was raised in 1848, and by some singular mistake was not placed on the axis of the two great avenues, but a hundred and twenty metres distant from the spot assigned to it. The same liberty was taken with the construction of the Administration Buildings and the White House. The Treasury was so placed as partly to hide the White House from whoever sees it from Pennsylvania Avenue. Finally the Congressional Library, the last and most unfortunate of the great buildings erected at Washington, lifts a gilded dome detracting from the neighbouring dome of the Capitol. Thus, to the end of the 19th century, the city was developed and enriched with buildings as if at hap-hazard.

But after 1900 this state of affairs ceased, and measures have since been taken that promise well for the future. A commission, chosen to study the state of the city and the improvements to be made to it, by common consent decided to return to L'Enfant's plan, happily corrected and developed. The most important things were done first; and before even examining a new plan, it was agreed that the railroad and station which dishonoured the handsome promenade of the Mall, must at all costs go. A suitable place for the Terminus Station was found on Massachusetts Avenue, that is, outside of the central triangle and of the three great prospects which it was above all important to preserve. The commission then turned to the planting of the Mall. It agreed

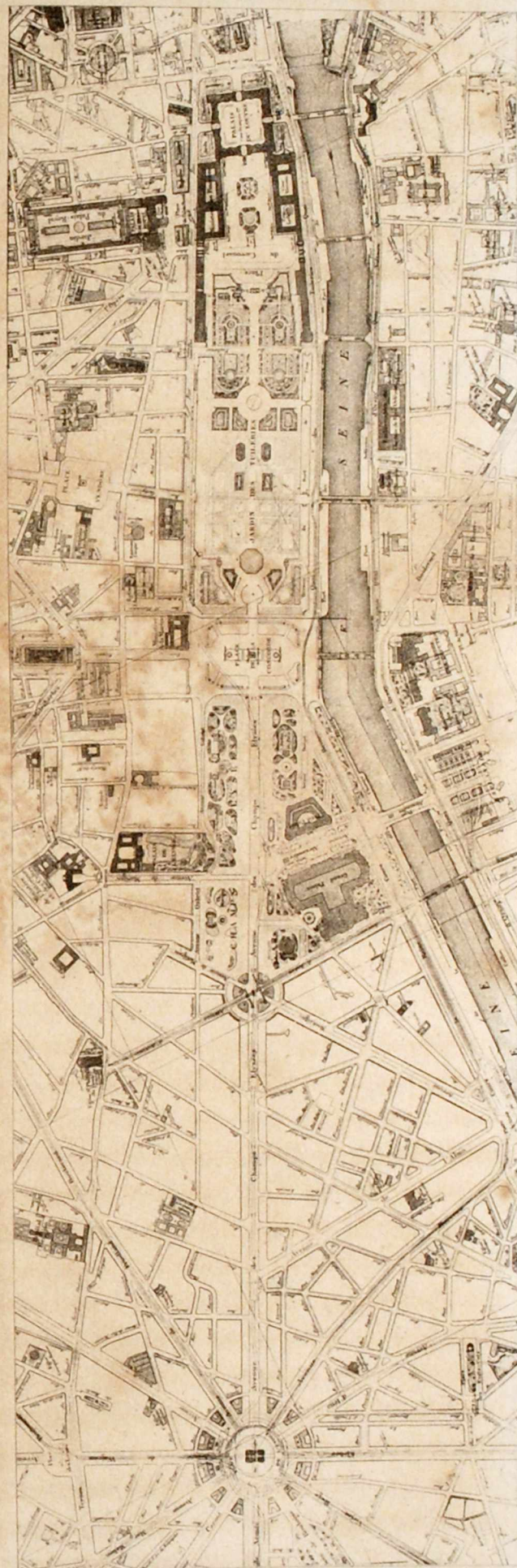
no doubt be required not to let it drag on through long years. The radical measures already taken, however, give good hope for the future of this gigantic undertaking.

The railroad and the horrible Terminus, which disfigured the Mall, were condemned and carried off with a fine impetus. Who knows how many obstacles such an enterprise would have met with in a European capital. We hardly doubt but that in a not distant future the city of Washington will present the same magnificent aspect to aerial travellers as it now presents in the bird's eye view of the drawing. When that day comes, no other capital in the world will equal it. Another work we hope will soon follow, similar to it but larger, created as a whole, free from all constraint and all servitude. Of this the plans will be found further on.

II

PARIS IN THE 19th CENTURY

The transformation of Paris in the 19th century is not, like the city of Washington, the creation of one man. No architect arranged for it beforehand. The force of circumstances rendered changes necessary and little by little suggested a plan. The city has not

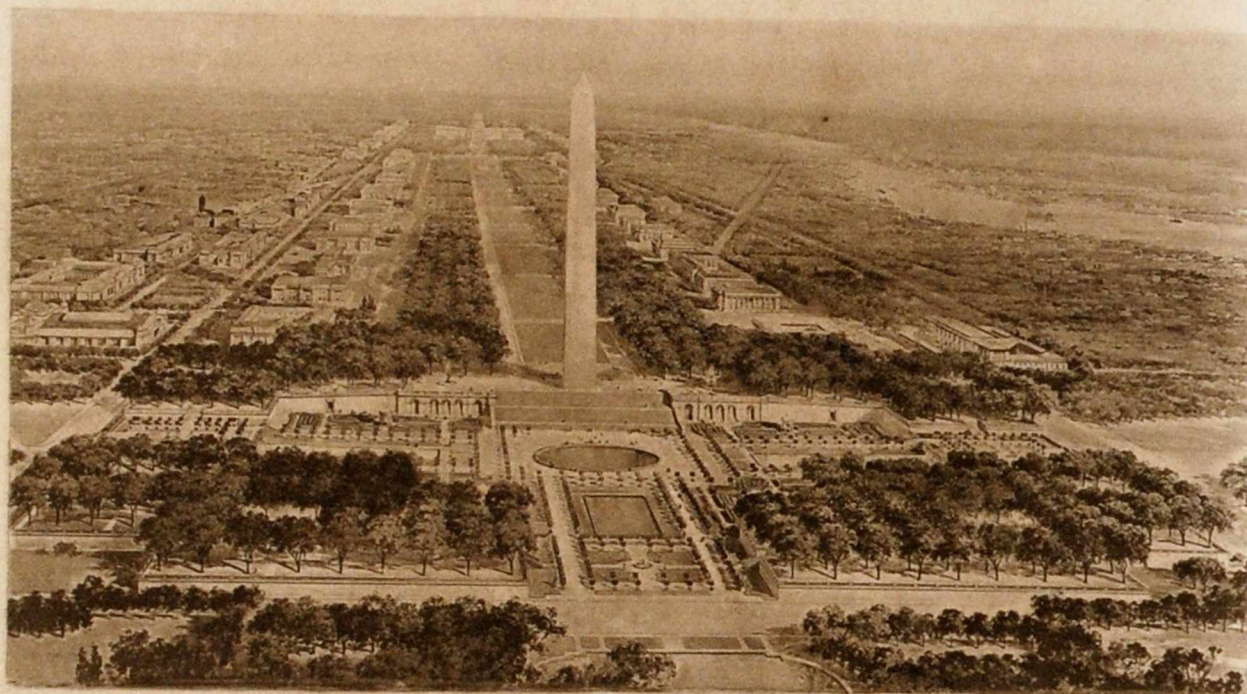


ENSEMBLE MONUMENTAL DU CENTRE DE PARIS

of the Mall as the Arc de l'Etoile in Paris ends that of the Champs Élysées. A monumental bridge, starting from the circle, is to bind the city to the other bank of the river.

All the land gained from the Potomac and comprised between the two promenades will then be covered with woods and cut through by avenues for riders.

South of the Obelisk, in the axis of the White House, the projected part of the immense avenue will become a sort of park for sports. A stadium, open and closed gymnasia, tennis-courts, etc., will be built. A basin



WASHINGTON. — PERSPECTIVE VIEW OF THE GREAT AVENUE

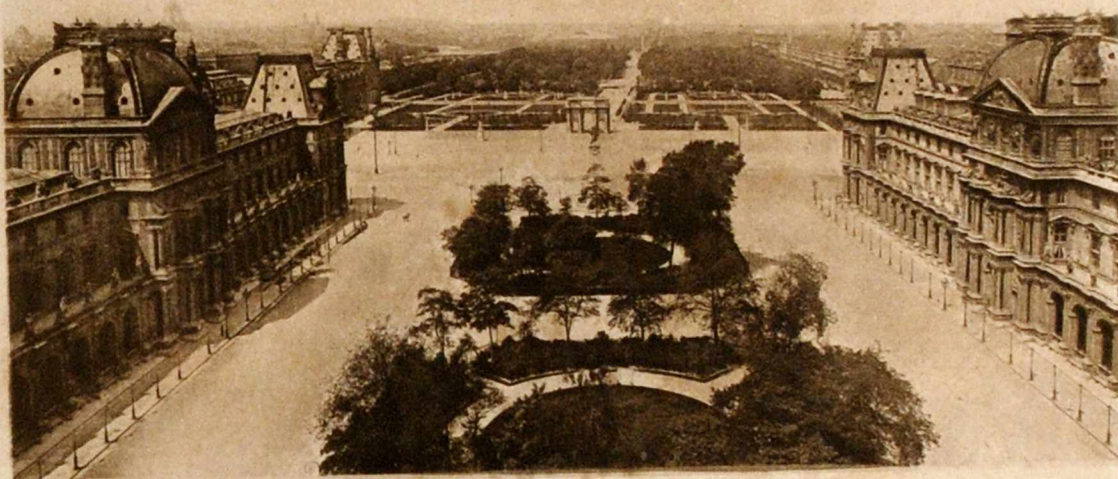
of running water, regular in shape, will be dug at the end of the prospect and arranged for nautical exercises. It will join the Potomac to the Washington Channel. At the point where the White House axis meets the Maryland Avenue axis, will rise another great building of which the purpose is not yet specified by the Commission, perhaps a national Pantheon.

For the placing of public buildings the new plan conforms faithfully to L'Enfant's system. Buildings relating to Legislation and Justice will be grouped about the Capitol. The Administration Buildings, and all those that have to do with the Executive Power, will be placed North of the White House, near La Fayette Square. On the sides of the Mall, Museums, libraries and other buildings having no special relation to the two Powers will be lined up. Finally : the dome of the Library is to be done away with.

This very large and very handsome project will perhaps not be carried out in every detail; but the big lines have already been adopted and the builders have begun work. All the tenacity of New World architects will

outlying spaces were gradually being built up. Indeed, the city was growing rapidly in this direction; everything indicated that these suburbs would soon become central quarters. It was not yet too late to plan them logically, a thing not to be done for old Paris, except at great cost. This latter part therefore was almost entirely neglected, while architects and engineers gave their whole attention to planning the new quarters that lay between the Louvre and the Bois de Boulogne.

The Place de la Concorde had been drawn and built since the time of Louis XV. The first thing of importance was to lengthen as far Westward as



PARIS. — PERSPECTIVE VIEW OF THE TUILERIES AND THE CHAMPS-ÉLYSÉES

possible, the breathing space and verdure already made by this square and the adjoining Tuileries Gardens. An avenue on the axis of the Louis XV statue had already long ago been arranged for. But little was wanting to turn this into a handsome promenade. The important point, however, was to decide upon a terminal motive. The avenue ran Westward, at first over flat land, then it ascended by quite a steep slope to the summit of a hill of sufficient height to cut off all the view. Clearly, this straight line must form the principal axis of the Western half of Paris. The royal palaces closed this long perspective on the East; on the other side it ended in the slope of the avenue. By no means must the view between the two be interrupted. This was the first thing to be guarded against. A garden, as wide as that of the Tuileries but much longer, was made to follow the Place de la Concorde, and was named, the Champs-Élysées. Further West, where the avenue begins to rise, the mistake was made of considerably narrowing it, leaving only rows of trees upon the sides instead of shrubbery and flower-beds.

to-day the same fine, simple, and logical arrangement as the American capital. Nevertheless it possesses a well-ordered central group of palaces, gardens and avenues which may be considered a very great work of art. Though this group grew gradually, it is not without a unity which tends always to increase.

The history of the Louvre and of the Tuileries led us, in another chapter, to the 19th century. That these two palaces should be connected was decided as early as the time of the Revolution. But simultaneously a much larger



PARIS. — PLACE DE LA CONCORDE

project was being conceived. The Louvre and the Tuileries should become the basis of a great system of avenues embracing the whole Western part of the city. In the fulfilment of this plan, the creation of the Place de l'Étoile marks the first and principal step. Logically, the two ancient Royal Palaces ought to have occupied a sort of circle in the centre of the town, from whence the great avenues should have radiated in all directions. Certainly, could Paris be remodelled according to the rules of art, this system would be adopted.

The history of this capital helps to make clear why such a system, theoretically practical for the whole, could be only partially carried out. In the beginning, the Louvre was not in the centre of Paris but in a part of the circumference. The site for the future Tuileries was outside the walls. At the end of the 18th century, the two buildings were still on the outskirts of a suburb. The heart of the capital was further up the river, near the Cité. East of the Louvre lay the compact mass of the old town, in which the cutting of wide, even roads had not yet been thought of. West, the vast

and without difficulties. The architect, Raymond, wanted a door decorated with columns, in the style of the Arc du Carrousel. Finally Chalgrin's project was preferred as more original and certainly more imposing. L'Arc de l'Étoile, as it stands to-day, conforms in its general lines to this plan; it is the simplest of all the structures of this kind. And from this, no doubt, proceeds its rare and very impressive beauty.

It is difficult to realise that it rises only to the height of 46 metres. From far or near, it always seems colossal; but this impression is due less to the size of the building than to its situation, one might say, its "mise en



PARIS. — PLACE DU CARROUSEL

scène ". One whole half of the city converges towards it. All the great avenues see it from afar and ascend the hill which supports it. The surrounding esplanade is sufficiently wide and sufficiently empty to prevent any interference. It forms the centre of an immense group, yet remains isolated. Everything is well calculated in order to show it off and to prepare the double emotion caused by a work of art and the memories which it awakens.

Many years, however, passed before this great conception was completed. The arch was but barely begun when, in 1814, the Empire fell. For a long time the construction was interrupted. It is hardly credible to-day that the monarchical government wished to dedicate the trophies of the imperial arms to the glory of the Duc d'Angoulême. The Revolution of 1830 restored the still unfinished monument to its first intention. The crowning stones were not placed until 1836. The great radiating avenues took longer yet. The Place de l'Étoile acquired its present aspect only in the second half of the

As to the monument which now arrests the gaze at the terminal and culminating point of this long breathing space of verdure, the honour of its conception is due to Napoleon I. The choice of a triumphal arch for this spot was happier than it could have been for any other place. Thus rising at the extremity of a long prospect, a monumental door, like that of the Étoile, arrests the gaze without stopping it. It fills the horizon, yet allows of a play of light and suggests the indefinite prolongation of the great avenue beyond. There is perhaps in no city in the world a more magnificent view than that



PARIS. — THE ARC-DE-TRIOMPHE

of the Champs-Élysées at the hour when the setting sun flames behind this gigantic trophy.

At the same time as the Arc-de-Triomphe was rising from the ground, the great square, of which the monument was to be the centre, was being designed. This was not conceived as a simple terminus to the long prospect of the Champs-Élysées but as the centre of an immense network of avenues arranged as a star. The radiating system was being adopted, most propitious to all great effects yet impossible to adapt to the confused and compact mass of old Paris. Thus, all the Western part of the city, North of the Seine, was divided into sections by a star of twelve great avenues planted with trees, of which the future arch should form the centre.

However, the building of the monument did not proceed without discussion

which Napoleon had intended to dedicate to Fame. This façade with columns was balanced on the other side of the river by that of the Legislative Body. Another street, the Rue Castiglione, was cut further East parallel with the Rue Royale. It leads to a monument that balances the Madeleine, though of quite a different appearance : the Colonne Vendôme, a celebrated trophy of the Napoleonic campaigns, modelled upon Trajan's Column and erected in 1816.

The most important and the best addition to the original plan of the Champs-Élysées is of recent date. It consists in a very wide avenue, opened through the gardens, which runs at right angles from the axis of the Louvre-Étoile and stretches unhindered as far as the Hôtel des Invalides. This very wide prospect culminates at one of the finest monuments of French architecture which can bear comparison with the triumphal arch. Standing on the Champs-Élysées at its point of meeting with the new Avenue Nicolas II, the spectator can see afar the gilded dome of the Invalides, the building of the Louvre and the Arc-de-Triomphe. In the two last directions the gaze runs between walls of verdure; towards the Invalides, the Avenue Nicolas II passes between the two Permanent Palaces built for the Exhibition of 1900.

III

UNIVERSAL EXHIBITIONS

Their influence upon modern architecture and upon international life.

A place, and not the least in the architecture of the last fifty years must be given to Universal Exhibitions. This kind of artistic and industrial Kermess has attained a magnitude unforeseen at its beginnings. Rarely have first class works remained from these exhibitions, but even those of which nothing has remained have played a part in the evolution of modern architecture : they have obliged architects to carry out very large programmes within a very short period of time.

Whatever merit they may have displayed in this new task, the architects of our day have certainly profited by their efforts. Nothing could more effectually have fostered a taste for such great conceptions as build or transform whole cities. At first, very light and easily demolished buildings were thought sufficient for the temporary purpose which they were intended to serve; but the last universal exhibitions were taken advantage of for building splendid, permanent palaces. In every case, these international celebrations have given a happy impetus to the art of building. The best results are yet to come, and the 20th century will be the more ready to appreciate them. Such colossal enterprises, destroyed on the morrow, lead us

century, when the Prefect Haussmann pushed on all the great Parisian works with feverish haste.

At the same time, the long awaited connection between the Tuileries and the Louvre was completed. The enterprise had been entrusted to the architect Visconti, who was soon succeeded by Lefuel. The Place du Carrousel was first rid of all parasitic buildings, and a gallery, like the old *Galerie du Bord de l'Eau*, 435 metres long, was built upon the Rue de Rivoli. To dissimu-



PARIS. — THE PONT ALEXANDRE III AND NICOLAS II AVENUE

late the fact that the two wings were not parallel, Visconti placed new buildings within the immense quadrilateral framing lateral courtyards. He was thus able to form an exactly rectangular esplanade between the Carrousel and the old court of the Louvre.

New avenues opening up views on to new buildings had gradually been joining the great breathing-space between the Tuileries and the Étoile. For these the radiating plan had not been adopted as in the surroundings of the triumphal arch, but the checkerboard system, in which the roads cut through one another at right angles.

At the same time that he built the two handsome palaces on the Place de la Concorde, the architect Gabriel opened the Rue Royale, the first avenue running at right angles from the axis of the Tuileries and the Champs-Élysées. At the end of this opening, and perhaps at too short a distance from it, the church of the Madeleine was soon afterwards built, a true antique temple

too severely geometrical. Nevertheless it may be hailed as the first attempt at an international building especially made to suit its purpose. An economic and artistic agreement among the nations was an unprecedented event. It suggested a new architectural type, wholly arranged for the cooperation of diverse peoples, united under one roof to celebrate in common a festival of art and industry.

Still other exhibitions were opened before the end of the 19th century, at London, Vienna, Philadelphia, Sydney, Barcelona and Chicago. The one



PARIS. — THE EIFFEL TOWER AND THE EXHIBITION OF 1900

at Paris in 1900, and those at St Louis, Brussels and Turin are too recent to need to be recalled. Every one of these enterprises attempted to surpass the others, if not in the size of buildings, at least in general magnitude and in picturesqueness of plan. They have accustomed us to the idea that a host of workmen may, even for a very short time, be put to work upon a vast piece of land, be made to cover it with a multitude of buildings and completely transform it.

The most sensational works, from the point of view of architectural technique were carried out upon the Champ de Mars for the Exhibition of 1889. As steel construction, the celebrated Palais des Machines far surpassed the Crystal Palace. To see the engineer, Eiffel, within a few months raise and complete his steel tower was still more surprising.

The Eiffel Tower is not a work of art; it is none the less an interesting accomplishment in the history of architecture. It has no practical use,

towards as vast but more durable achievements. It is for them that steel architecture has accomplished its most remarkable feats. The largest hall and the highest tower in the world were built in a few months for a universal exhibition. The 20th century has only to profit by the progress made in architectural technique and to build structures for a higher use and with a more carefully studied art.

The first exhibition was held at London, in 1850. The honour of this initiative, of which the happy consequences are now evident, is due to the English. The Royal Society of Arts, Manufactures and Commerce first conceived the idea. The English Government gave liberal aid. Through her ambassadors, the other nations were invited to take part. The Exhibition consisted chiefly in the products of industry; the fine-arts were given but a secondary place. Architecture, however, achieved a triumph in the celebrated Crystal Palace. To-day this immense metal skeleton arouses little enthusiasm; but in its time, it was considered a marvel. Built in a few months, so large an iron framework had never before been seen. It was perhaps a mistake to think that this manner of building could in itself be made to produce masterpieces. But this first exploit showed at least that miracles could be thus achieved. In any case, the art of building could not fail to profit by it and saw the opening of a new era.

The example of the English quickly awoke the emulation of other peoples. The London Exhibition was soon followed by three others: at Dublin, New-York and Munich. In 1855 a fifth was held in Paris. This last had the merit of associating the fine-arts for the first time with a festival of industry. But it left behind a very poor building, which for a long time disfigured the Champs-Élysées. In 1862 the nations met in London for the second time. A large iron and brick structure, not badly adapted to its purpose but of a heavy and mournful appearance, was built in Kensington Park.

In 1867 another exhibition, eclipsing by far all the preceding ones was inaugurated in Paris. The whole Champ de Mars was covered with avenues and structures. Four monumental doors were opened on the four sides of the immense enclosure. The great Palace of Industry and Fine-Arts in the centre, though of questionable beauty, was ingeniously planned to meet the new requirements. Divided by a transversal gallery, 380 metres long by 110 wide, it consisted of two great semicircles, of a radius of 190 metres. The whole was divided into concentric zones. Each kind of product occupied one of these zones, and every nation reserved one of the radiating sections. Thanks to this arrangement, the visitors could, by following one of these concentric galleries, see all the products of a given kind from the several countries; and following one section from the centre to the periphery, they could pass in review all the artistic and industrial products of any given country. This plan can perhaps be reproached with being a little

meet in congress and to harmonise their work. Industrial and artistic competitions have formed more bonds than rivalries among peoples. These great foreign festivals at which so many nations have met, have slowly prepared the way for a good understanding among States.

Already the progress is foreseen which must shortly be accomplished both in art and in world relations. Doubtless we shall not see many more of those magnificent and temporary buildings, which after a few months must be demolished. But the nations will need a permanent meeting-ground. They will have to build a city in common, especially planned to unite their representatives. The creation of this international centre will no doubt be the most original work of the 20th century.



PARIS. — THE TOWER OF THREE HUNDRED MÈTRES

which is a great defect in any structure. But it gives the measure of human attainment in a certain direction. An architect always has been, and more and more will be an artist plus a technician. The Eiffel Tower is chiefly interesting because of its technical construction, and thereby it cannot fail to influence the art of tomorrow. It establishes what sportsmen call a record of height. In this it succeeds by the simplest methods and by making the fewest possible concessions to aesthetics. The care of uniting beauty with the science of building such colossal constructions is left to the architects of the future.

This open-work pyramid, more slender than a church spire, ends the long series of monuments of which, in the preceding pages, we have noted the most important. At all times, since the first attempts in the art of building, man has striven to reach the heavens. At first he could only lift a tree-trunk or a block of stone. Successive inventions made it possible for him to raise this vertical monument ever higher, with the true purpose of dominating ever further. The formless block of the menhir, under the chisel, became the obelisk. After the invention of stone-cutting, the obelisk was surpassed by the pyramid.

The signal monument was then able to attain the dizzying height of 160 metres. For many centuries human industry remained incapable of renewing this feat. By very different means from those used by the Egyptians, the cathedral builders were the first to approach it. The spire of Strasburg rises to 142 metres; the one at Rouen to 150; at Cologne to 156. Finally, in the middle of the 19th century, American engineers made a stone monument higher than the great pyramid of Cheops. The enormous Washington Obelisk reaches the height of 169 metres.

But steel construction took an impetus and suddenly sprang up much higher yet. The Eiffel Tower carries the vertical effort to 300 metres in the air. This prowess might have seemed astonishing in 1889, but it is still more surprising that after twenty years it has not been surpassed. Such undaunted attempts to build heavenward are, however, not yet at an end. It is an inborn human necessity thus to prove the power of industry and to express infinite aspirations.

Perhaps the 20th century will renounce the habit of universal exhibitions. If this were so, there would, perhaps, be no cause greatly to regret them, nor on the other hand, to undervalue their happy influence, which doubtless will outlive them. The chief thing with which they can be reproached is that of having given birth to a trumpery style of architecture, as fragile as it is over-ornamented. But the fact remains true that they have awakened in our architects the taste for great enterprises and have thereby increased the creative power of monumental art. Let us add that in the political history of the world they have inaugurated a new epoch: that of *international collaboration*. They have furnished the opportunity for scholars of all nations and races to

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PART II

CREATION OF AN INTERNATIONAL
WORLD-CENTRE OF COMMUNICATION

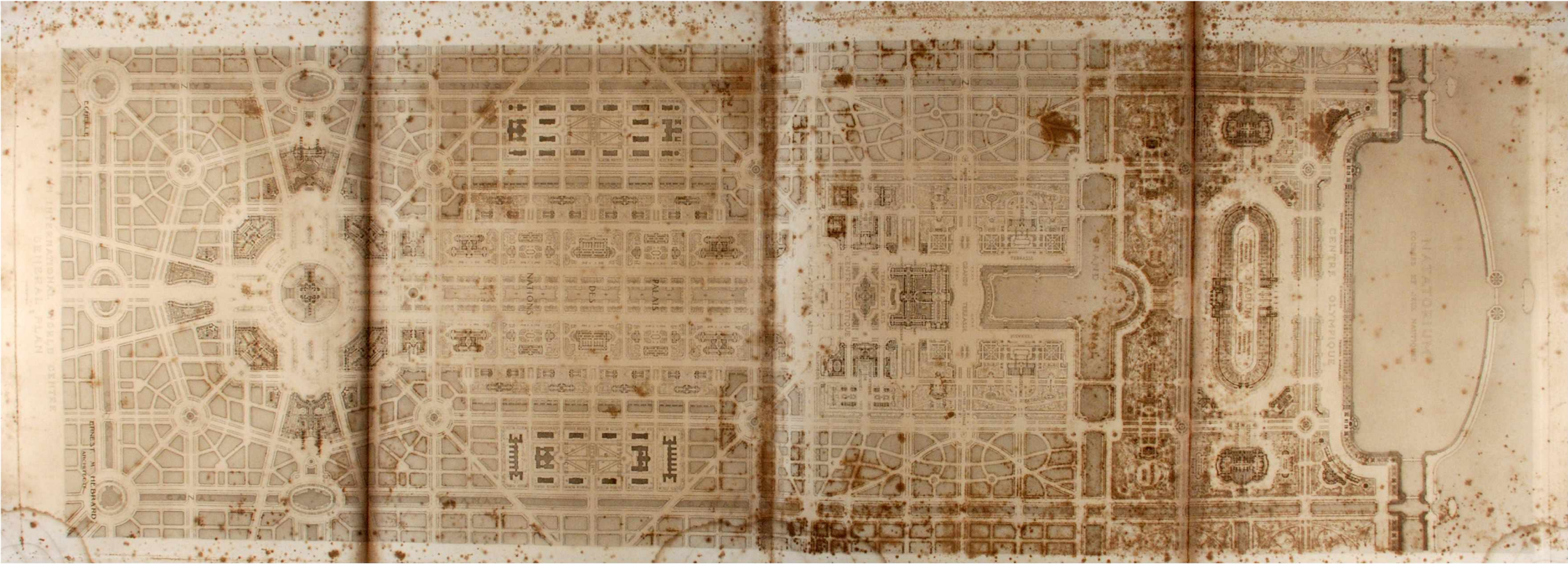
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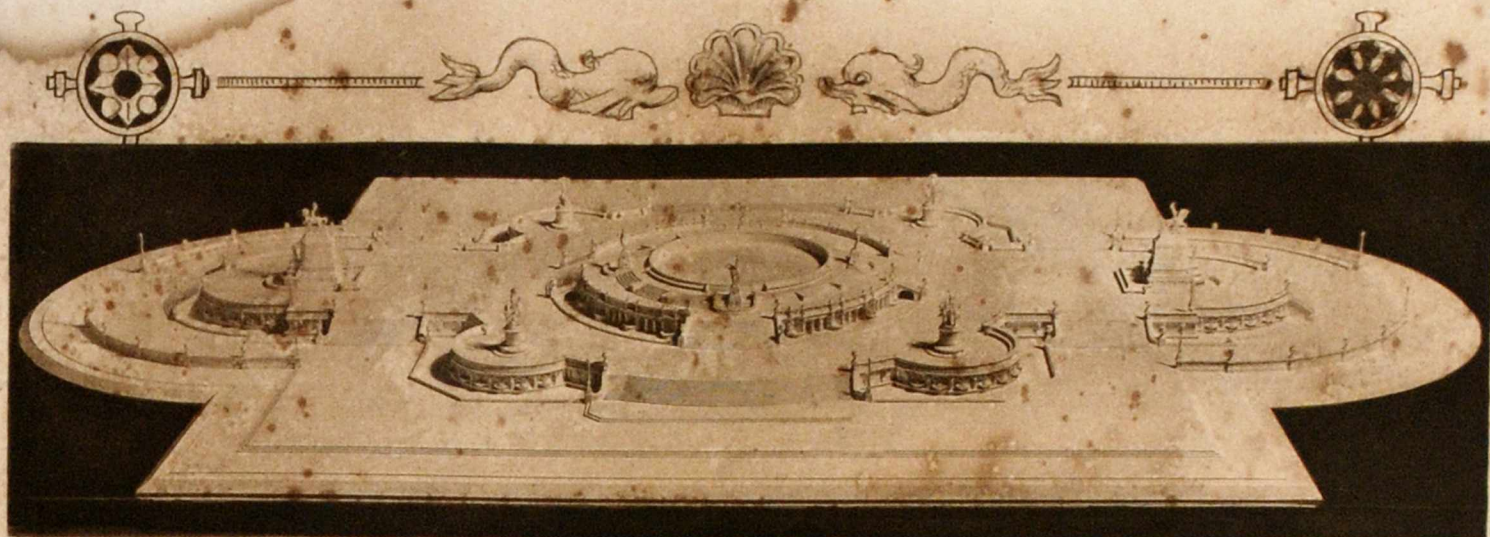
1912

INTERNATIONAL WORLD CENTRE.

PERSPECTIVE GENERALE VUE A VOL D'OISEAU.

HENDRIK C. ANDERSEN

PROJETE PAR HERRARD, ARCHITECTE



FOUNTAIN OF LIFE

AND

GENERAL PLANS



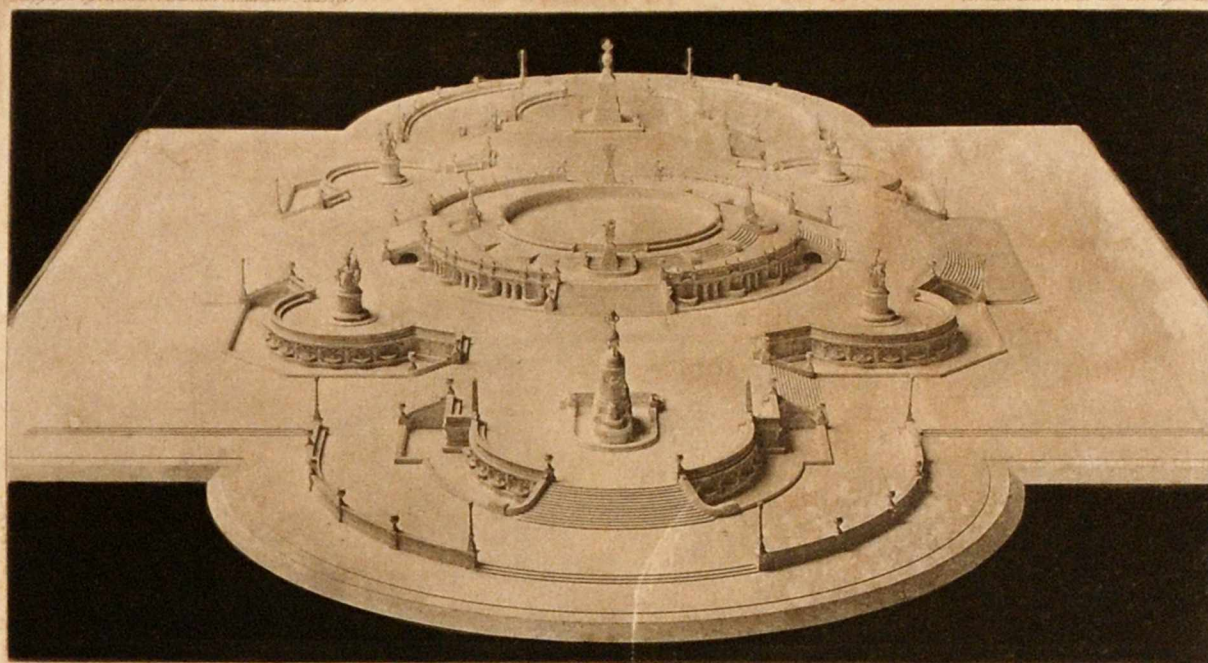
DETAIL
OF THE GROUP "DAY"

THE International World Centre of Communication here presented, is divided into three parts, intimately bound together and, as will be seen by referring to the general plan, designed to complete and enrich one another in such manner as to form an inseparable and complete whole. The idea of this centre grew gradually, and at first, very modestly, perhaps by inspiration, while the writer was at work upon a "Fountain of Life", but took form only after long consideration of the many vital necessities required in furthering the progress of the world.

Fountains have ever been indispensable and no doubt always will be. Where pure water was found flowing freely, we know that people in days of old traversing the desert or marching in groups, met together to rest, to communicate and discuss their views, aims and ambitions; and often the idea of building a town or a city was suggested, because a pure spring offered an ample and free supply to man and beast.

In the early ages there were not always the means or the ability to give

the basin and forms a simple promenade completely surrounded by steps. The second, also circular, leads by four symmetrical staircases to the third; the supporting walls of this terrace are ornamented with innumerable little water-falls tumbling into basins below. The terrace, very much wider, is in the shape of a square; four semicircles project from the corners, and two larger ones from two of the opposite sides. Broad stairs lead to the level



SIDE VIEW OF THE "FOUNTAIN OF LIFE"

of the ground, and from the walls of the semicircles hundreds of water jets leap sparkling into basins beneath. Between the jets stand a multitude of bronze children in high relief holding wreaths and garlands. Thus, the elevation of the fountain is slightly pyramidal, but separate flights of a few steps each suffice to reach the several levels. The waters of the central basin, that cover the mosaics, fall, from the two lower levels, in cascades, following the curving outline of the terrace parapets.

These mosaics form the central note of colour and will be clearly seen beneath the surface of shallow water which will cover them. The sequence of the seasons, and their variety of tints, passing over the world and enriching it by their changes, are represented by four symbolic figures of women, whose bodies, wrapped in brightly coloured garments, radiate in opposite directions. With outstretched arms and flowing hair wreathed in leaves and flowers, they hold closely together in the centre. From their midst, a jet of water may be made to spring high in the air. Rich designs in blue and gold are to be carried out upon the parapets, as well as upon the pedestals of the several groups, to give life and variety to these architectural designs.

At night, the whole fountain can be illuminated from beneath by lights

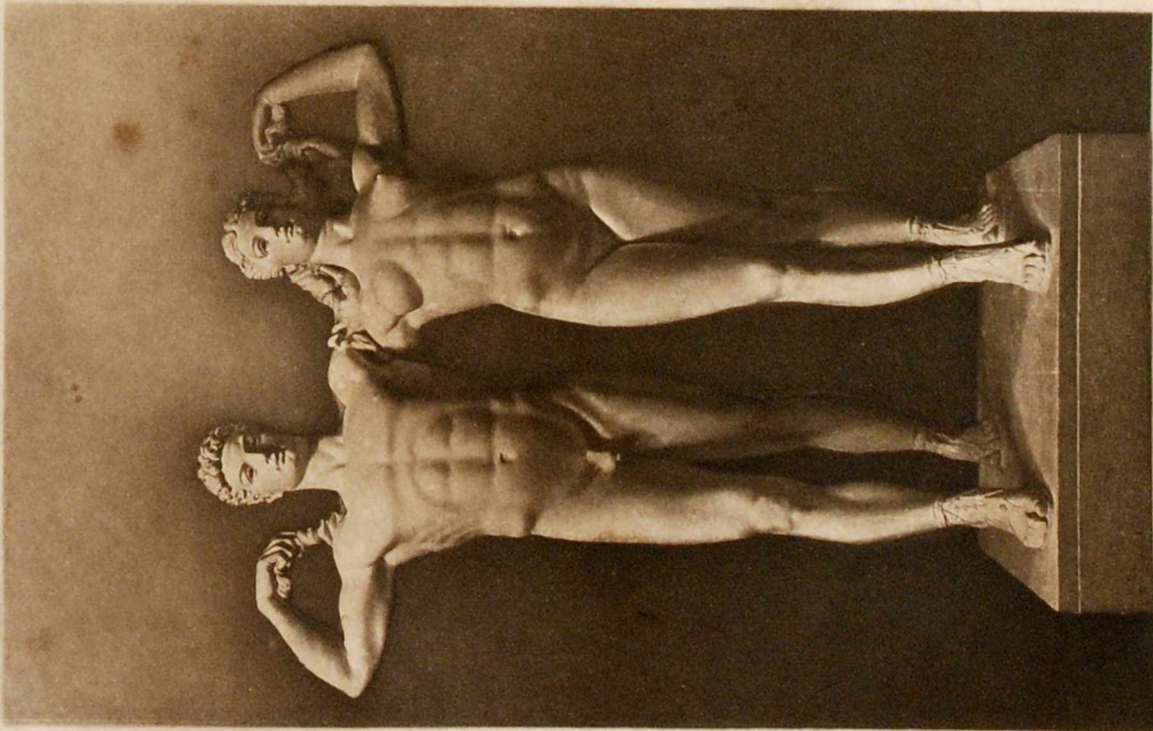
the natural outflow of water any artistic interpretation. Yet, although the story may be legendary, a rare beauty surrounds the well beside which Jesus of Nazareth stopped to rest and drink, and there first used the fountain as a symbol to suggest something more than the spring that merely wells up from the ground. "Whosoever drinketh of this water shall thirst again", he said, "but whosoever drinketh of the water that I shall give him shall never thirst. But the water that I shall give him shall be in him a well of water springing up into everlasting life." No sculptured image remains more clearly in the imagination than these simple words, by which the fountain has been glorified and consecrated to all humanity.

Later, and especially in the Middle Ages, we find fountains decorating cities and towns, many without any special attraction, but some of imposing importance and high artistic merit placed monumentally in squares and richly decorated with symbolic and allegorical figures. But although these form an artistic sculptured setting, they seldom appeal to the imagination as symbolising anything human or intellectual. Yet what worthier subject could a sculptor find for the exercise of his art than the glorification of the spirit of the everlasting flow of pure water? Indeed, should not this in itself inspire him to glorify the everlasting current of the spirit of humanity, in its varied phases, on its brief but divine mission from Dawn to Day, from Evening to Night, and back into the arms of its eternal Creator? Life in itself is as a flowing stream, beautiful and symbolic in its varied manifestations and aspirations, pure and uplifting, strong and above all things divine and everlasting, as conceived in the beginning. To grasp and to transform the highest ideals of human beauty into symbolic form, to infuse each form with strength and rhythm and to arrange these with harmonious display, beside ever-flowing, pure water, seems in itself one of the most natural and harmonious efforts to which an artist could devote himself.

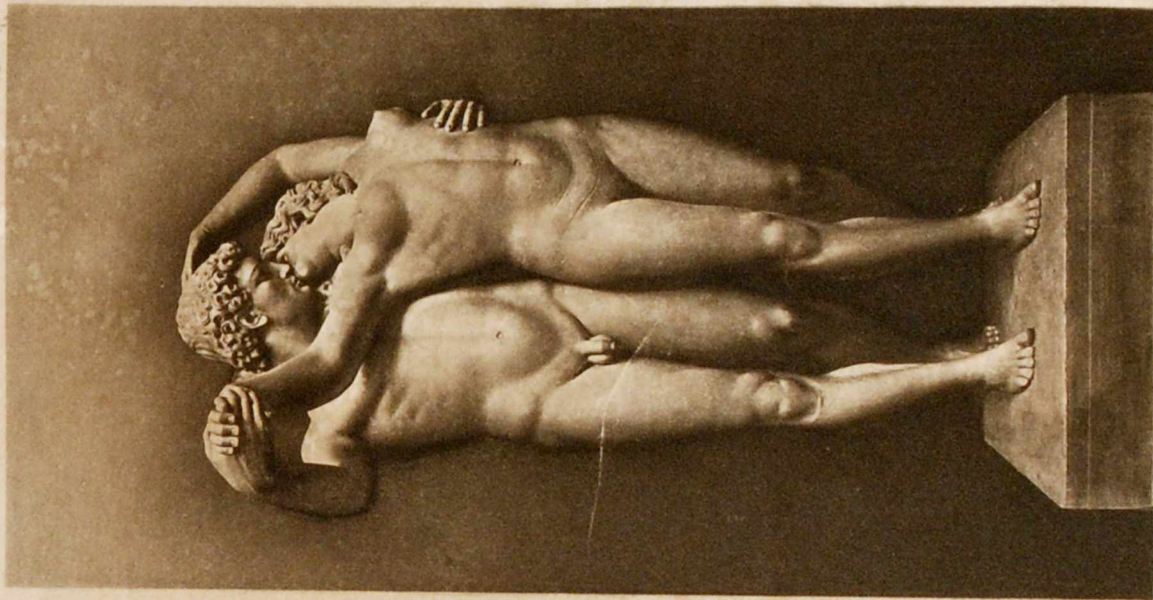
The fountain, therefore, now before us was begun in the endeavour to objectify in lasting material the fairest human forms — not only forms that convey high ideals of the human body, but those that show its simplest and most inherent vital forces which inspire love and intellectual conceptions.

It seemed naturally to take the shape of a large circular basin of which the bottom of blue mosaic symbolises a world, with four symbolic figures traced upon it in brightly coloured mosaics, representing the seasons. Four large groups of four figures with children, protected by a central figure, represent the varying shades of sentiment that bind humanity together and the triumph of love; the two equestrian statues denoting the lower forces controlled by human intelligence. All these, placed in an architectural setting, are surrounded by ample promenades, seats, and cascades of ever-flowing sparkling water.

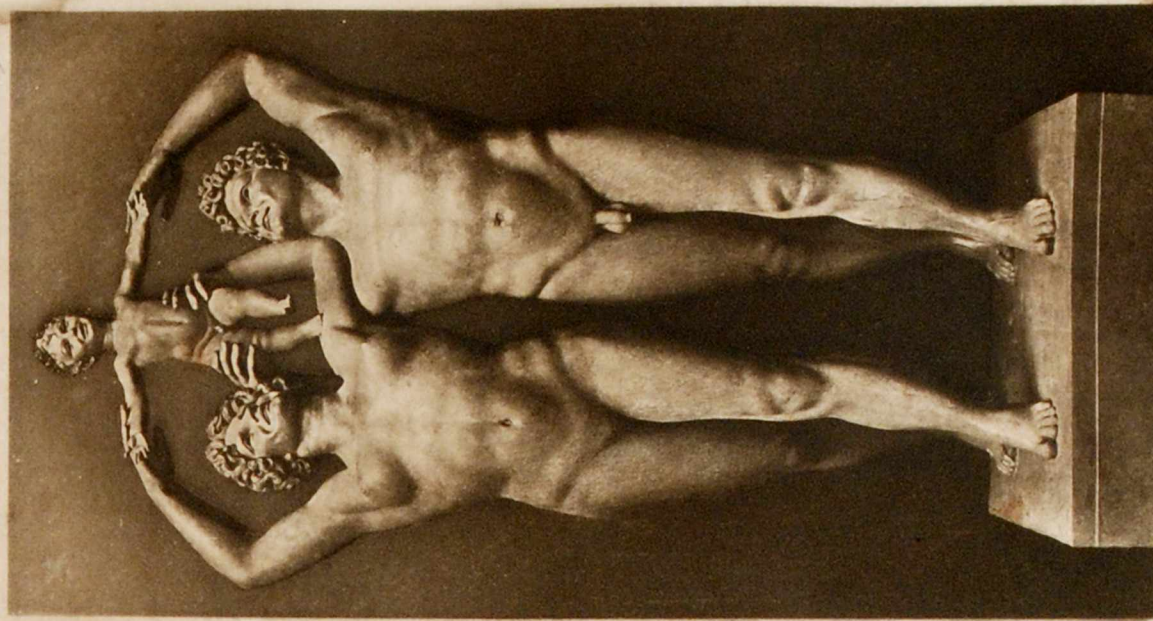
In this composition, the central basin is raised in the midst of three terraces placed one above the other. The highest and narrowest, encircles



FELLOWSHIP



LOVE



THE JOY OF LIFE

which are to encircle the inner rim of the spherical basin, and shine through the cascades that fall from the several terraces. These falling masses of water have been carefully studied in order that they may produce a musical variety of sound, in harmony with the varied forms of this architectural setting.

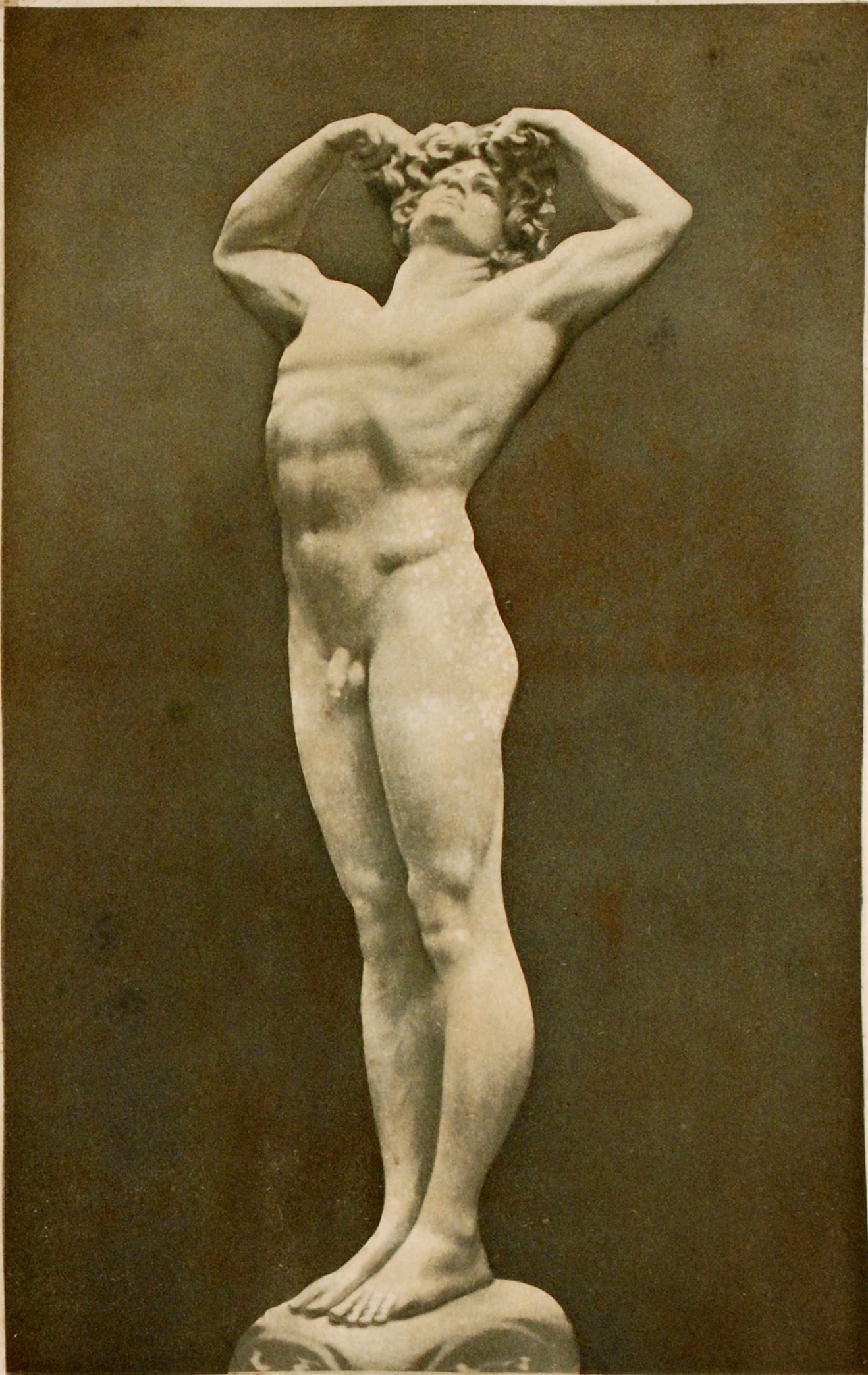


GROUP OF THE PROGRESS OF HUMANITY

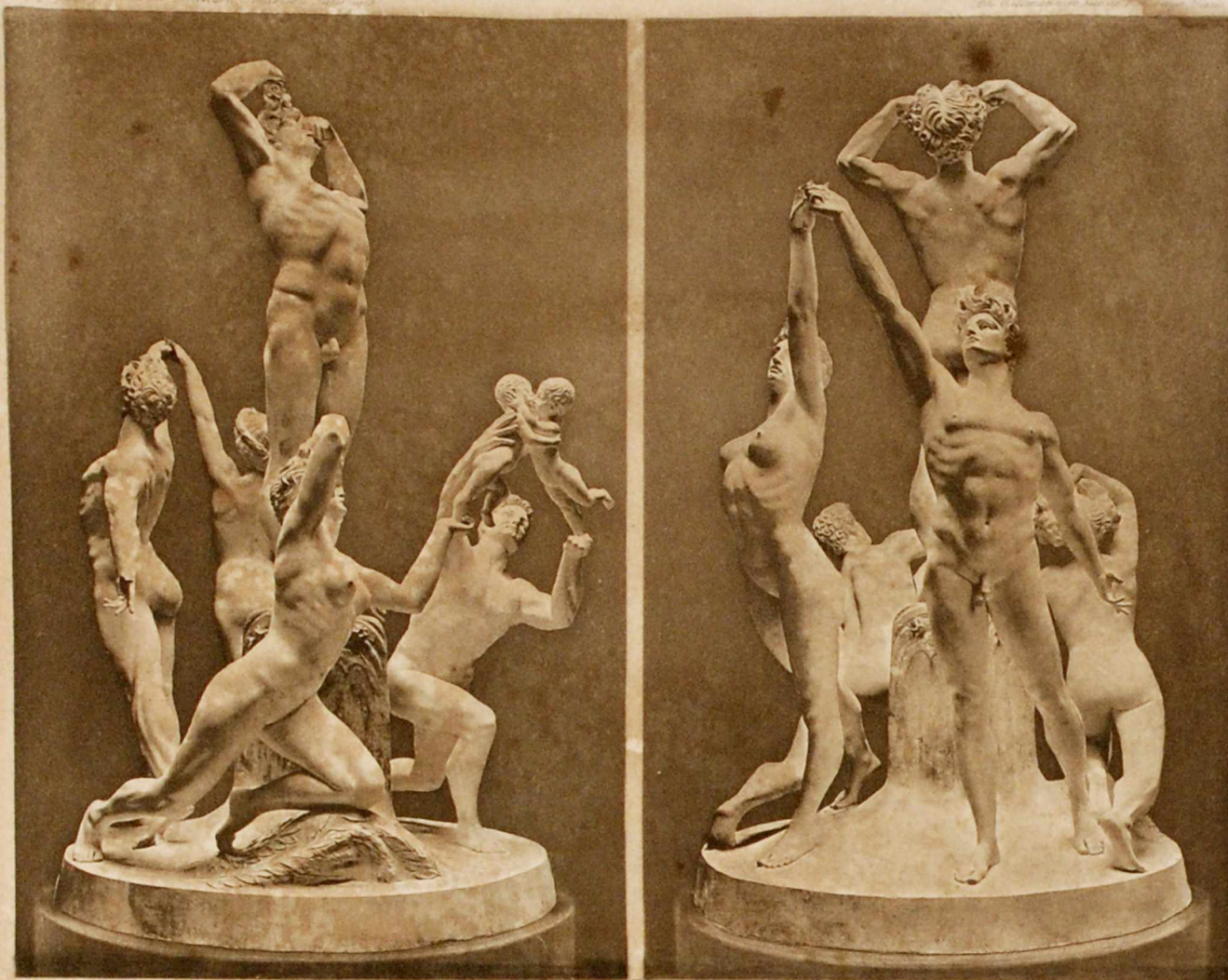
Radiating from the central basin, four of the bronze groups stand upon the topmost terrace. Each is composed of a man and a woman, the human couple advancing in harmony and supporting each other without conscious effort. Strong, supple limbs are given to both, with only a touch of added grace to the female figure, which is kept harmoniously in line with that of the male, and is almost equally developed. The heads are carefully studied in the endeavour to make a type, in which love, simplicity and intellect should be united. The hair and other details are moulded in the bronze and chiselled with minute care. One of these groups represents friendship, peaceful and grave, the next, love, which draws the couple into an embrace; the next the common affection for their child, which supported on their shoulders by corresponding postures, opens its little arms to

life; while the last portrays the common love of progress with which the pair go forward in unison, holding aloft the fruit of their love.

The larger groups *Morning*, *Day*, *Evening* and *Night* stand upon round pedestals in the four symmetrical semicircles of the lower terrace and are composed of five figures. Four of these with children stand in circles below; while from their midst rises a higher figure: the Hour of the Day, personified. In all of these the bodies are as carefully studied for their possibilities of expression as are the faces. From the soles of the feet to the tips of the fingers in every position, with the little children lifted high, the muscular rhythm is sought which gives the stimulus of morning, the exuberance of day, the languor of evening and the repose of night.



SPIRIT OF MORNING



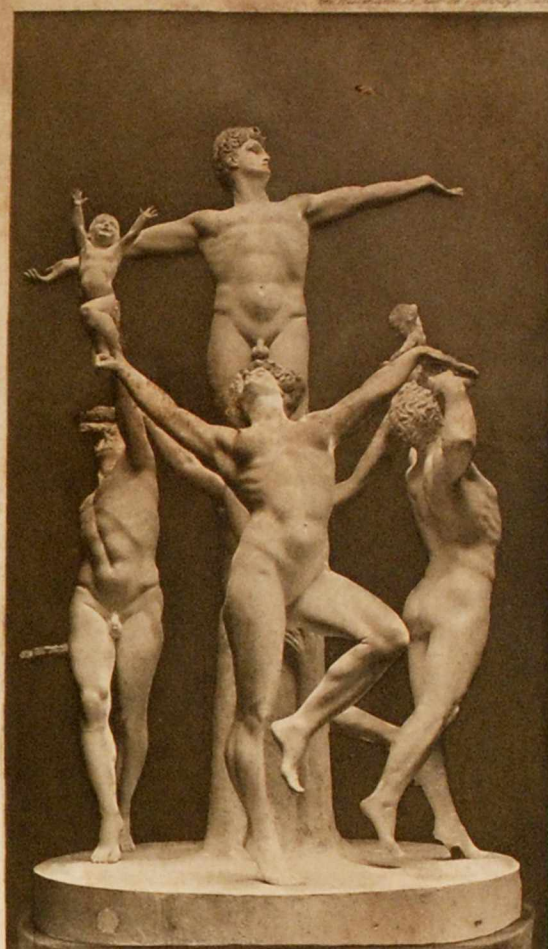
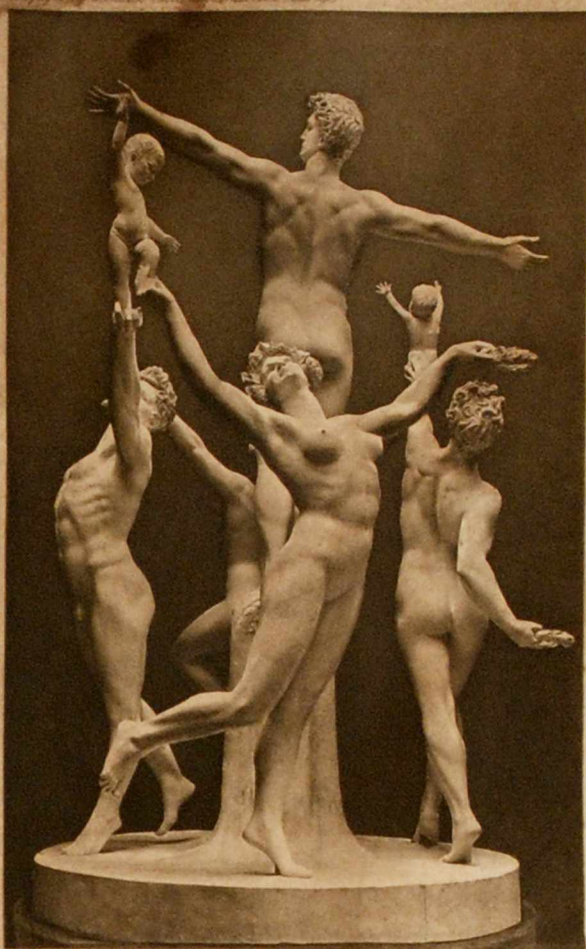
GROUP OF " MORNING "

MORNING



THE MORNING KISS

THE " Morning " Spirit is represented by a man standing in conscious strength upon an elevation, his body slightly turned, as moving from night into day. With every muscle in readiness, he clears a massive lock of hair from his forehead, and looks into the face of the dawn. Below a man and a woman spring up from the ground, and hold towards each other two little children who kiss in the air, symbolising the happy beginning of life. On the opposite side a couple, hand in hand, move freely forward, with strength of purpose and upturned faces, ready to meet the life that lies before them. In making this group the endeavour was to bring a human rhythm of motion into the conception of Morning; a rhythm of forms rising and springing up into the day. The children, with their innocent kisses, held aloft by the strong arms of father and mother, form the pledge of undying love between them, and symbolise the evolution and divinity of humanity rising like flowers into the light of day.



GROUP OF DAY

DAY

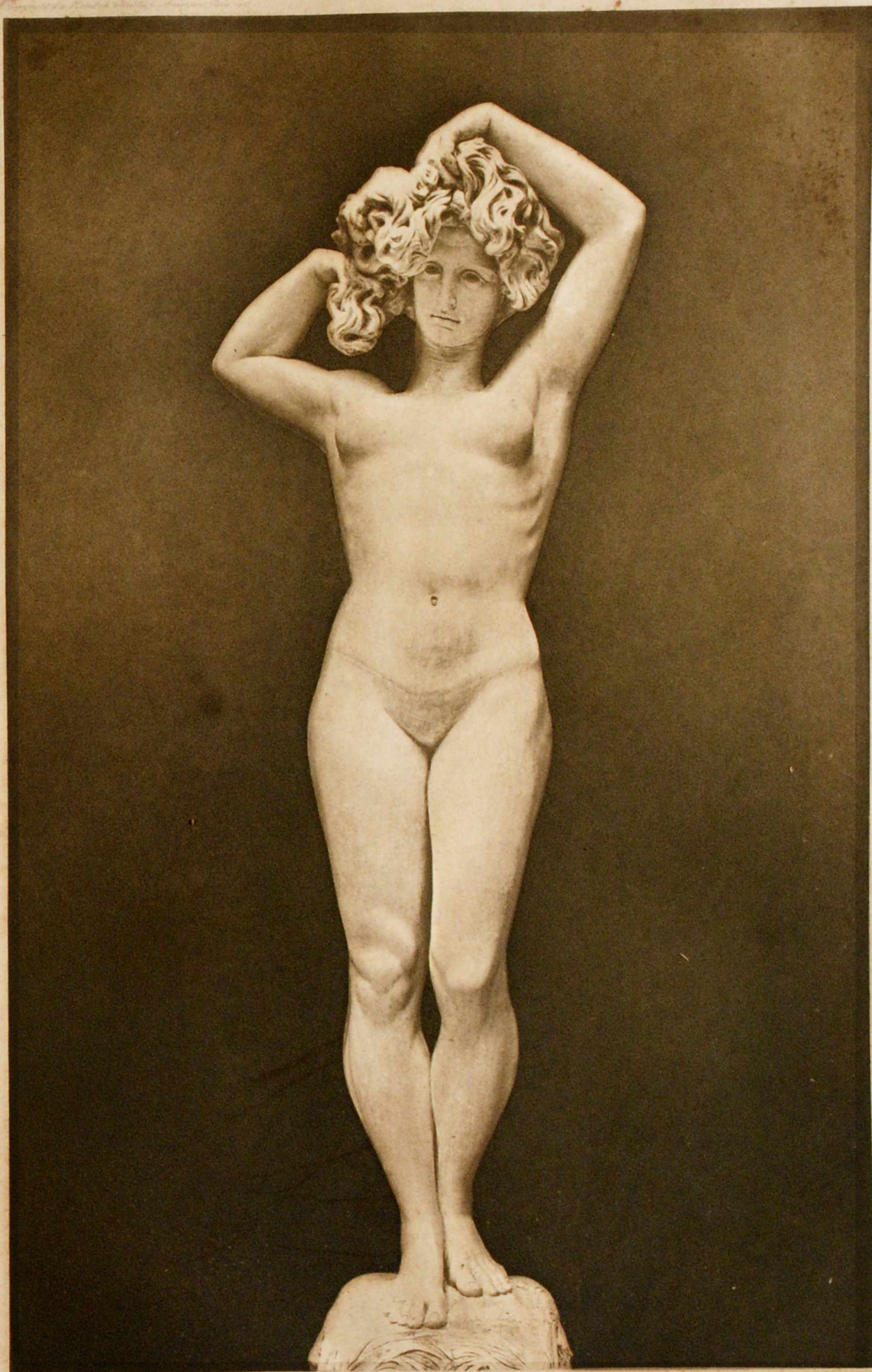


THE JOY OF DAY

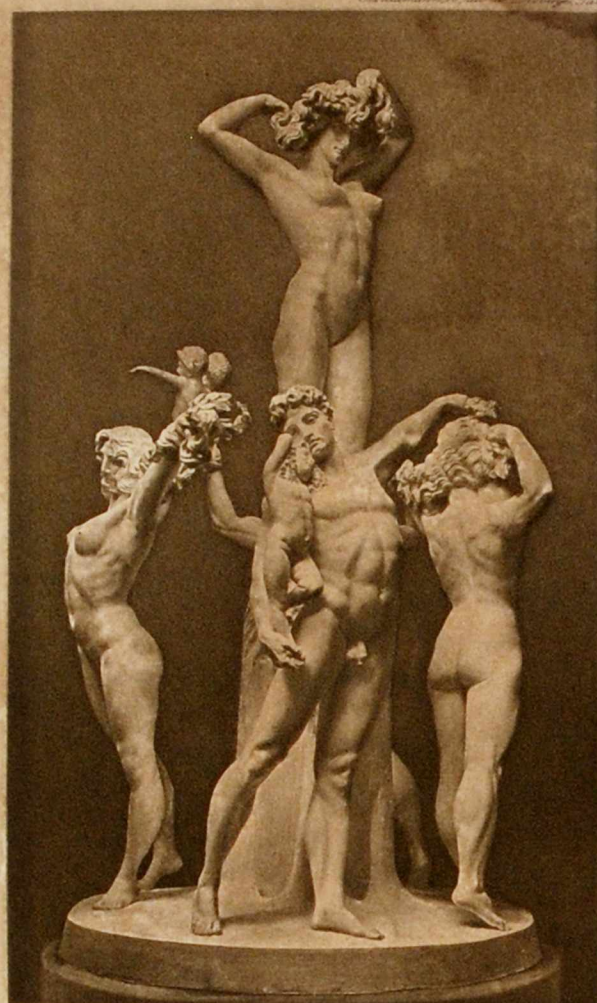
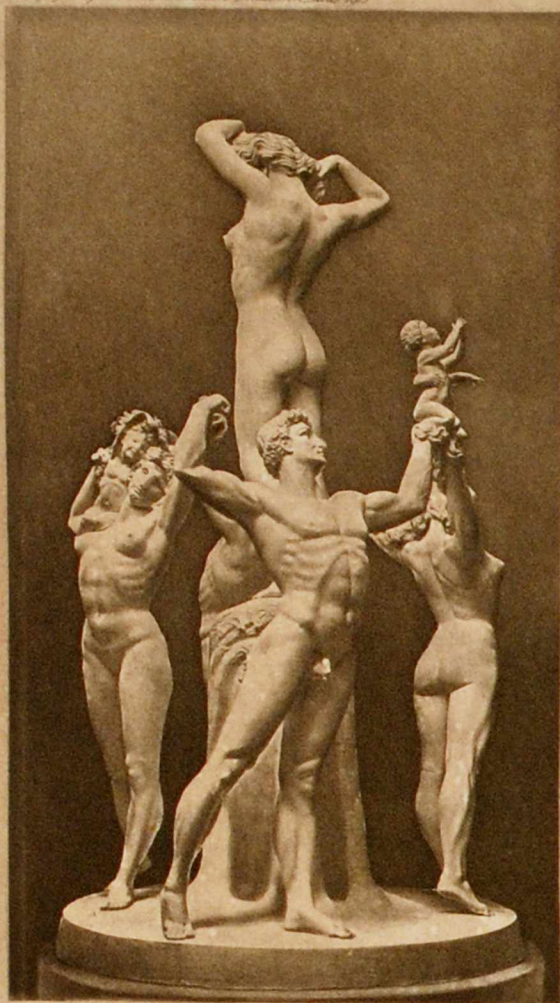
IN "Day" the group is crowned by a man in full vigour standing upon an elevation and looking with serene composure into the future. The tranquil lines of his figure denote the spirit of calm which ever rises beyond the turmoil of life. Below four upright figures dance exultingly. The father and mother lift towards heaven their enraptured child, that beaming with the universal joy, reaches impetuously upwards to the light. Here a bolder rhythm of human forms is sought. Again children are raised in triumph; again they form the deathless human link. The dancers, animated by innocence and freedom, exuberant joy suffusing their faces, happiness expressed in their vigorous movements, circle round the strong Spirit of Day, whose wide open arms seem ready to embrace the universe. This group, composed of five figures and children, — the joyous undying fruit of life, harmoniously blent together, expresses the poetry of day and the happiness of existence.



SPIRIT OF DAY



SPIRIT OF EVENING



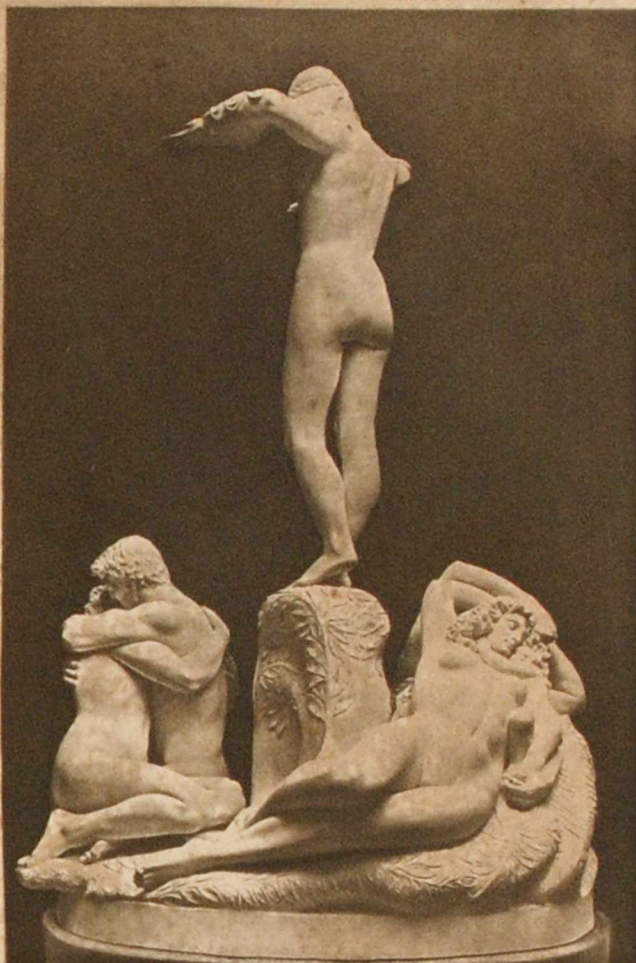
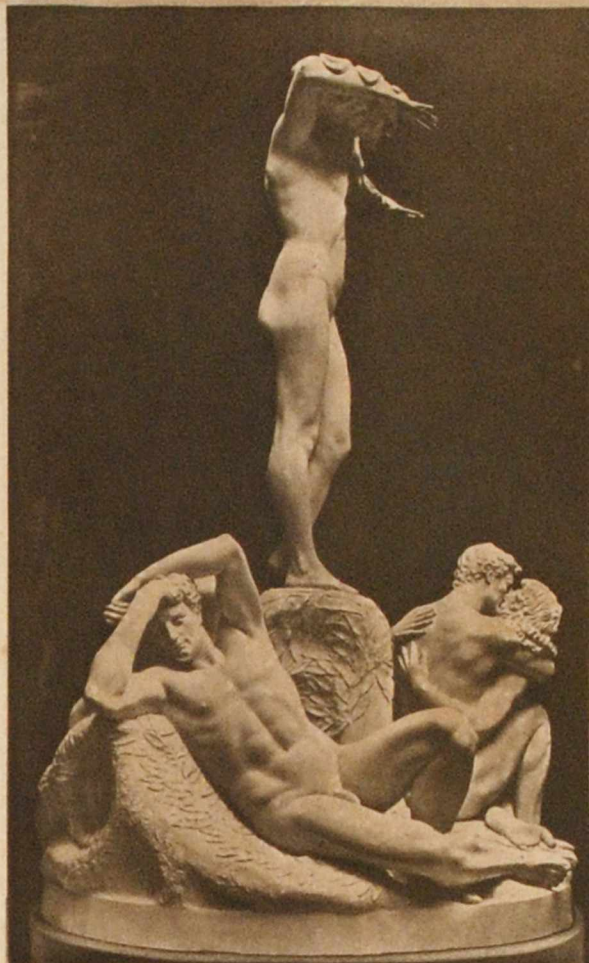
GROUP OF "EVENING"

EVENING



THE EVENING PRAYER

EVENING is dominated by the figure of a woman unfolding the heavy coils of her hair, image of the shadows that are about to fall upon the earth. The surrounding figures, move with a slower rhythm, the energy of their bodies relaxed by an incipient languor. Two little children, are kneeling side by side. One lifts a trustful face towards heaven and prays; the other stretches out a caressing little arm, as though bidding good-bye to the fading day. Another child, almost overpowered with sleep, rests its head affectionately upon the shoulder of its father, who looks tenderly down at the little limbs that blend into the strong lines of his muscular body. A fourth child upon its mother's shoulder, half lost in the tresses of her hair, nestles securely sheltered in this maternal nest, and, enfolded in soft shadows, looks eagerly into the coming night; whilst her opening wings symbolise the power of thought liberated in dreams.



GROUP OF "NIGHT"

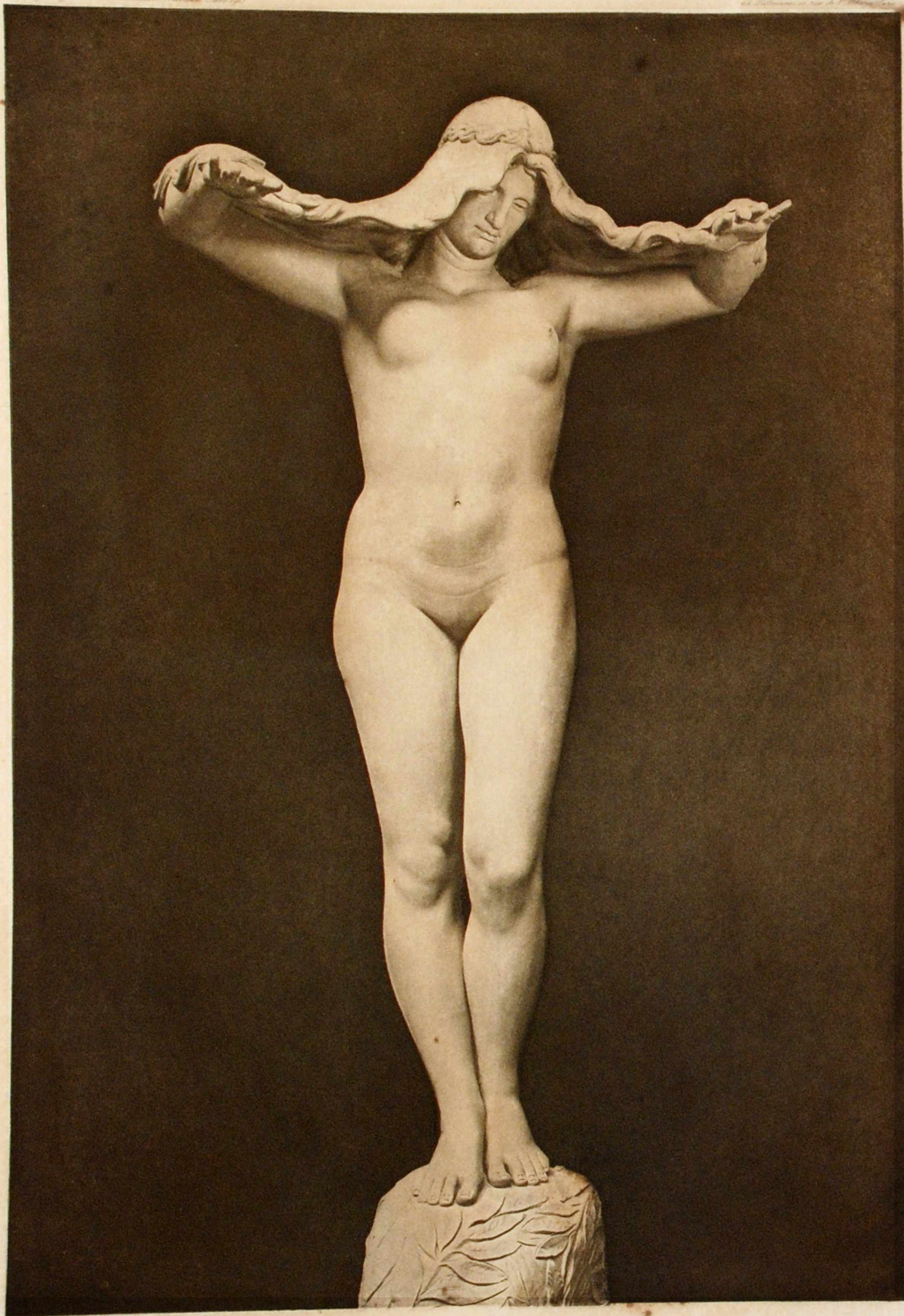
NIGHT



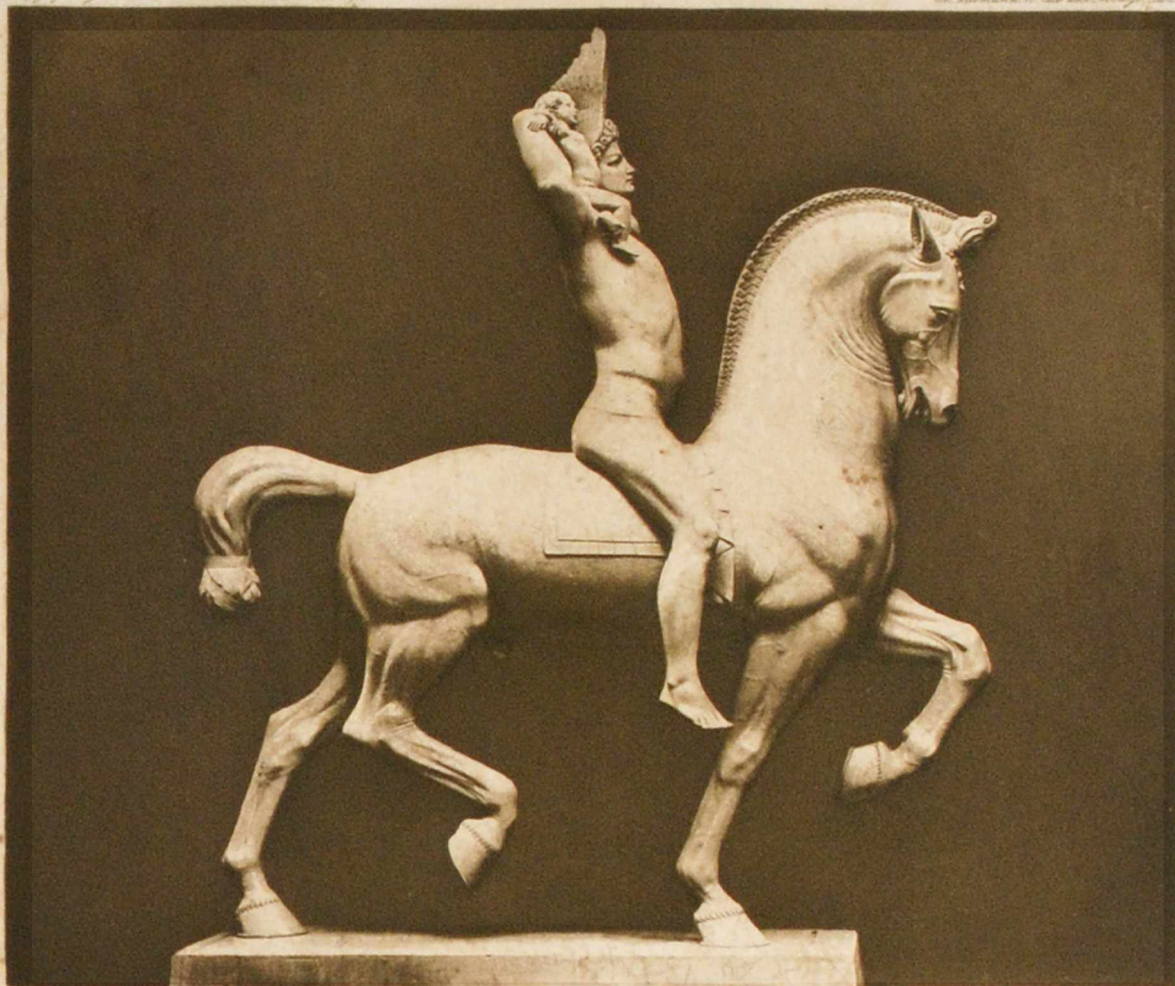
SLEEP

IN the last group, "Night", the central figure with flowing hair raised upon her strong and supple arms, her mysterious face thickly veiled in shadows, stands motionless, and with outstretched hands of benediction, bends in loving protection over two figures blent in an embrace. This pair, whose limbs form a harmonious unity, symbolises a deathless love merged in eternity. Nobility and passion unite and infuse the seed of life, whose tender limbs lie slumbering in a rhythm of maternal grace. Sleeping peacefully, with clasped hands two other figures are stretched upon the ground; the little child also sleeps happily pillowed on its mother's breast, and held by her enfolding arm as in a natural cradle in which, with harmony of line, the little limbs repose, softly shadowed by her loose and flowing hair, which seems a symbol of everlasting protection.

This group is the last of the four sculptured compositions which, each with its own theme, seeks to express the rhythm of the musical flow of life



SPIRIT OF NIGHT



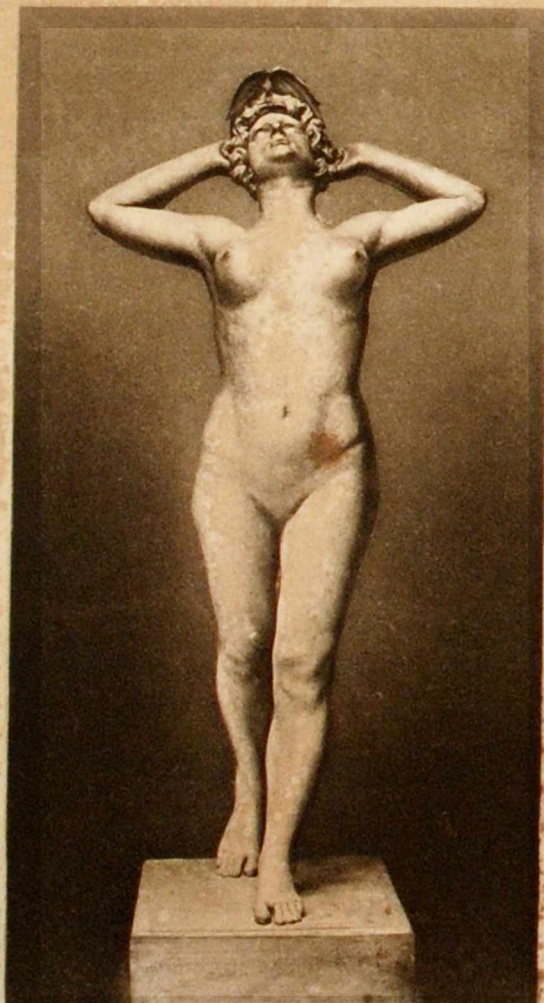
EQUESTRIAN STATUE — MALE FIGURE

sition and with innocence and fearlessness, look smiling at the world ahead. The horses which symbolise the lower forces of nature controlled by man, are brought into a monumental outline in which nothing superfluous or merely individual is retained, and which in sculptural language expresses strength and power of motion. Upon a lower level, on the steps of each of the two pedestals, the upright figure of a woman advances in the same direction as the horses and seems to guide the way. One, with uplifted arms signifies "Prayer"; the other listens with both hands behind her ears as if to catch a response from above. She personifies aspiration towards the ideal which stimulates and guides the progress of humanity; while, as if following the





EQUESTRIAN STATUE — FEMALE FIGURE



through human forms, harmoniously blending them into a moving whole. Love, fellowship, serenity and immortality, infused into the animated forms of humanity, are symbolised by ideal groupings of man and woman united by the sweet fruit of love, and created to flow, as living waters, from morning through the day into the evening, and thence into the night of eternity.

The two equestrian statues, symmetrically placed in the semicircles on either side of the lower terrace, are composed of a horse and rider, the one a man, the other a woman, bearing upon their shoulders two little children, the younger generation. These little ones, though securely resting in the shadow of wings, the symbol of thought, hold themselves firmly in their high po-

buted throughout the world. The task was not only that of planning on colossal lines the framework of the undertaking, but of harmoniously blending the parts together, as if they were the veins and arteries of a single body, depending, so to say, on a heart, through which the blood, driven by healthy, vigorous pulsations might flow, and after being purified and strengthened by the highest attainments in art, science, religion and law, might freely circulate throughout the whole organism.

In the ideal project here presented, as will be seen by looking at the general plan, this International Centre was conceived as facing the sea, so that it might connect the water ways of the globe. Ideal plans have also been made for the construction, around this centre of a practical, modern city, capable of holding a million inhabitants, and suggestions are given for a possible extension beyond these boundaries by the addition of "garden cities" to promote healthy expansion. Both parts of this plan were drawn up only after prolonged and careful study of the most economic and practical systems of city-building, and they were worked out so as to bring the whole into a monumental and imposing harmony; at the same time all the latest scientific and hygienic methods have been adopted. The City will be fully discussed in another chapter.

We shall begin here with the International Centre which is bounded on three sides by a broad canal. Roughly, covering a rectangle of five kilometres in length, by one in width, it forms as it were the heart of the city, and consists of three parts: a *Physical Culture* or *Olympic Centre*, an *Art Centre* and a *Scientific Centre*.

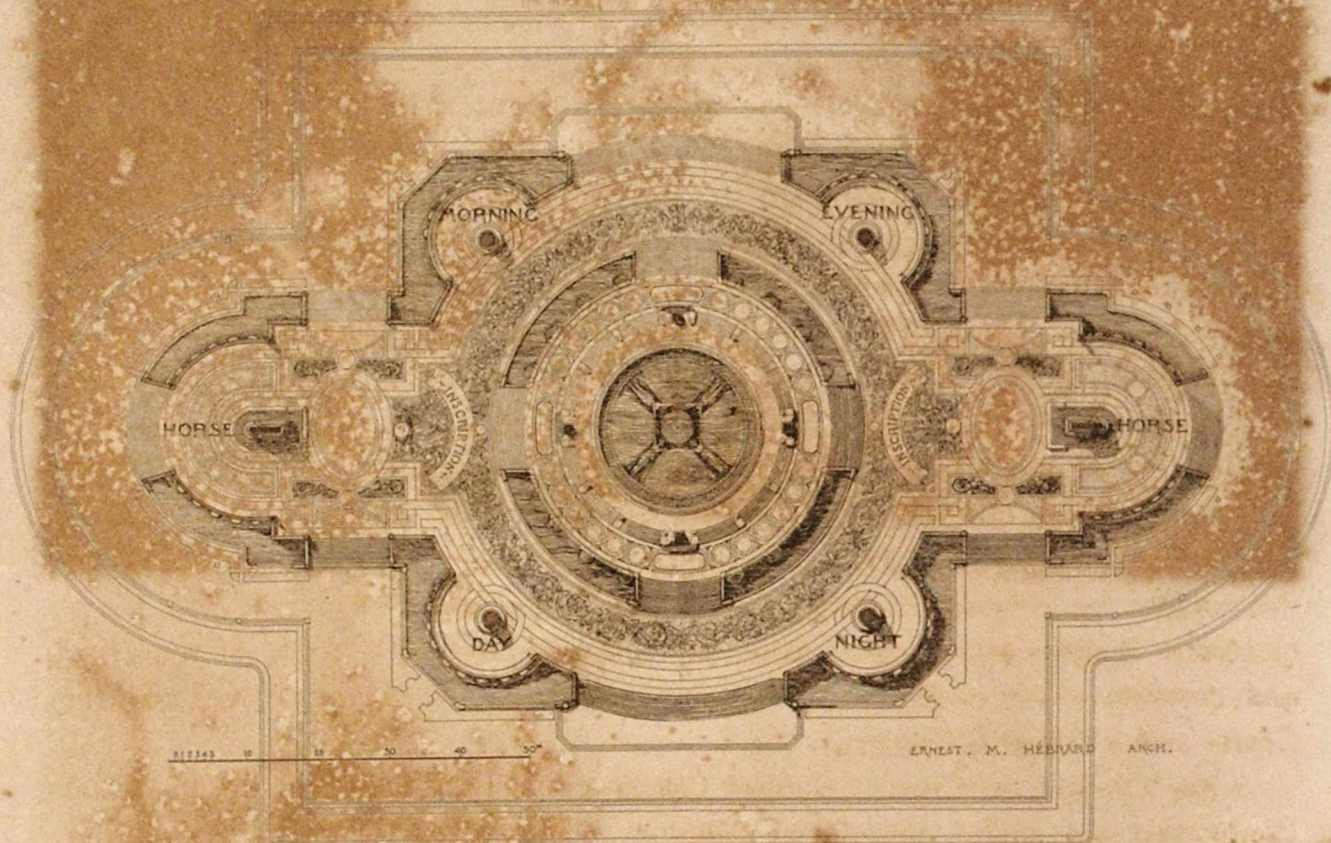
The *Olympic* or *Physical Culture Centre*, consists of a colossal *Natatorium* facing the sea and a very large *Stadium*. The latter forms the crowning feature of this part of the International Centre, and is surrounded by broad avenues and gardens. To the right and left are *Physical Culture Schools* or *Gymnasias*, one for men, the other for women. These again are surrounded by gardens and ample spaces for out-of-door sports, arranged as running-tracks, tennis-courts, arenas for ball games, boxing and wrestling, a skating rink, an out-door gymnasium, a kindergarten for children, etc.

The *Art Centre* consists of a central Temple of Art, with an adjoining Conservatorium for Music and the Drama, a School of Fine-Arts, an Art and Musical Library and a Museum of Casts, all these set in the midst of gardens containing an Open-air Theatre and School of Painting, Botanical and Zoological Gardens, a Natural History Museum and Green-Houses, connecting this centre with the preceding.

The *Scientific Centre* consists of a central Tower of Progress that rises with majestic lines into the heavens,—a monumental symbol of progress, signalling and drawing humanity to a common centre in which to house and protect their interests. From its soaring height wireless messages may be received from all parts of the world. At its base a World Press, planned upon colossal

rhythm of this aspiration, a cascade of water falls musically beneath her feet.

The whole conception of this fountain designed to express love and fellowship, symbolises the perpetual flow of human form in animated beauty, the symphony of immortality ideally blending humanity into a joyous whole. And it was while the writer was at work upon this composition that, little by little, the thought grew of surrounding it



GROUND PLAN OF THE FOUNTAIN

with a new beauty : the beauty of harmonising all human endeavours and of concentrating them into one practical and unified whole.

Thus, from striving to unite the highest physical forms of life and animation in a "Fountain of Life" grew the idea of planning monumentally upon harmonious and practical lines a World Centre or "Fountain of ever flowing Knowledge" to be fed by the whole world of human endeavour in art, science, religion, commerce, industry and law; and in turn to diffuse through the whole of humanity as though it were one grand, divine body, conceived by God, the vital requirements which would renew its strength, protect its rights, and enable it to attain greater heights through a concentration of world effort.

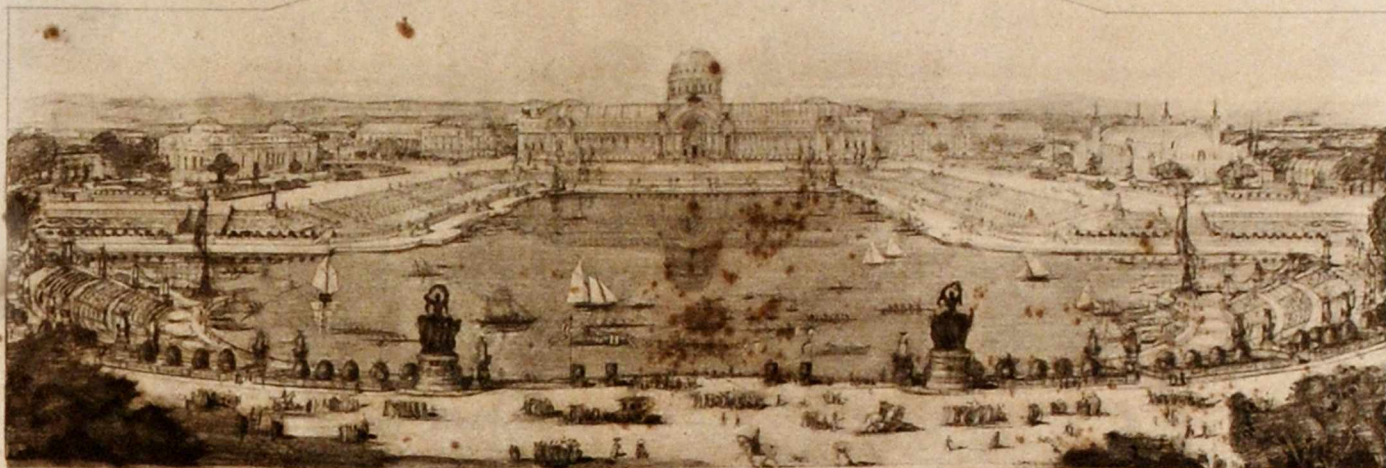
This International Centre was conceived as embodying and uniting all the world's scientific, artistic and physical achievements, and as testing their values in relation to human needs and progress, to the end that, after obtaining an international sanction of their excellence, they might be distri-

lines, could receive and rapidly distribute throughout the world all knowledge of vital importance. Surrounding this Tower which dominates the whole centre and city, are four International Scientific Congress Buildings of imposing proportions. To the right and left rise the monumental Temple of Religions, and the International Court of Justice, crowned with symmetrical domes. An International Reference Library and Bank or Clearing House, planned on a similar scale and lying on either side of the broad avenue leading into the city, form the main entrance into the International Centre from the land side. Between these structures lie six smaller buildings to serve as annexes or clubs for the use of delegates, representatives and visitors.

This Scientific Centre is united to the Art and Physical Culture Centres by two vast, parallel avenues, divided by a canal through which run the waters of the "Fountain of Life" traversed by bridges and bordered by terraces and gardens; the whole forming the *Avenue of the Nations*. These terraces and gardens are arranged to contain statues of the great men of all nations who have done most towards harmonising the world, and thus form a symbolic as well as an historic art gallery, uniting the three centres of human endeavour. On either side of this Avenue are *Palaces of the Nations*, for delegates and ambassadors from the different countries. At the extremities or entrances of these avenues, four symmetrical buildings contain reception and banqueting halls with accommodations for delegates and visitors. Inconspicuously placed are the entrances to the underground tubes which connect every part of the International Centre with every other, and with the residential city. It will be noticed that to right and left of the Avenue of the Nations, forming two wings beyond the Palaces of the Nations, are planned the Institutes of Higher Learning, for the theoretical and practical sciences, law, religion and letters. These, as will be seen, are again surrounded by gardens, quiet parks and fountains, and though isolated in tranquil surroundings, they have the advantage of being within almost immediate reach of the Scientific Congress Buildings, the Temple of Religions the Court of Justice, Reference Library, Bank, etc., and thus complete this international World Centre of communication.

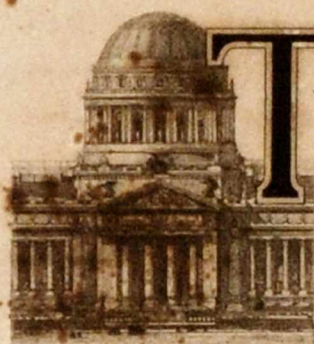


ERNEST HÉBRARD
ARCHITECTE



GARDENS, GRAND CANAL AND TEMPLE OF ART

THE ART CENTRE



ENTRANCE
TO THE TEMPLE OF ART

THE conception of an *International Art Centre* followed naturally, as the motives that inspired the making of the Fountain of Life were developed. It consists of a Temple of Art, a Conservatorium of Music and the Drama, Schools of Art, Museum of Casts, and an Art Library, an Open air Theatre and School of Painting.

In ancient times splendid temples of rich coloured marbles, supported by columns and surrounded by sculptured friezes of a musical rhythm of proportion, were conceived and consecrated to the worship of the gods, — personifications of invisible powers, held sacred in the minds of the people and inspiring them with faith and devotion. In like manner this Temple of Art was conceived and dedicated to the Creative Spirit of God in man.

That the highest achievements in art, music and the drama, should have a world centre and a Temple built upon monumental lines, to bring together the highest efforts and inspirations of the future, is an idea which cannot but appeal to all creators of art, not only for its practical value to themselves, but as going far towards forming higher ideals to meet the ever increasing demand.

One realises more and more that the art of the future will have more than a local value. The ideals that art strives to attain are becoming more

become international in spite of their native lands, or the local laws that too often would hold them back in cruel chains of limitation. The bird in the air is free to fly from the North to the South, from the East to the West, and may build its nest, and fulfil its little life, and sing its song in all parts of the world. Nothing but climate hampers its freedom. The creative artist will and must have the same liberty. His voice, if appealing and inspiring, belongs to the whole world. The colour and form he can give, if animating and uplifting, are eagerly sought for and prized by all mankind. More and more, as the world's population increases and spreads, the true artist must include and uplift the whole human race by strong ideals. His conceptions must be based on the great human needs that are common to all, and thus his task becomes more elevating and broader in its scope.

The creation of ideals and the truthful portrayal of grand aspirations and searchings after nobler things constitute man's highest mission. Art and science together search for truths which elevate and animate life. The aim of each, though theoretically different, is practically the same; they both strive to create. The scientist, in controlling hidden energies, producing motor power, destroying disease, generating light, and endeavouring to reveal the unseen universe, raises man upon a securer plane of existence, and enables him to interpret divine truth more logically and comprehensively. The artist by seeking a higher presentment of beauty and form, creates emblems of all human activities; with delicate lines and majestic grandeur he blends the material and the divine in a symbol of animated purity; and by composing symphonies that uplift the soul through the magic of their rhythm, unites the sympathies of humanity into an ideal undying harmony.

Therefore it seems needless to go into philosophical detail in order to explain the priceless value of works of art in relation to human progress, or to dwell upon their technical or moral worth. Yet it may be said that all true works of art, as well as all great achievements in science, are, by virtue of their excellence and their power of appeal, becoming international property. The former besides their actual technical and aesthetic qualities, represent the history of man's evolution. His ideals and religion, his social ambitions and culture at different epochs can all be clearly traced by means of the leading art productions of the time, — productions which are now of inestimable historic value. Notwithstanding the fact that most nations have their own art centre and national gallery, as well as schools, the creation of an international centre would meet an ever increasing need: that of collecting the best works of art in a common permanent centre, whence after being duly accepted the masterpieces might be distributed, in order to secure the advancement of art along grander and broader lines.

International exhibitions prove how rapidly the art of all nations may be collected and diffused again throughout the world. They have already gone far towards uniting the artist and the art of one nation with those of

generally understood. Its mission is now larger, and the demand for works of art is ever increasing. Therefore the artist, in spite of national ties and sentiments, is beginning to work on the widest lines that appeal to the whole world; and as scientific accomplishments have been blended, so the blending of painting and sculpture, music and the drama, has already begun.

Music and the drama are so intimately connected with painting, sculpture and architecture that one may say they form the limbs of one divine body whose soul infuses the same immortal ideals and inspirations into sound, colour, form and line. Drawn from the deepest sentiments of the human soul, they give to man a concentrated symbol of life, appealing to the highest forms of love, morality and justice; together they merge into a single voice, that inspires, uplifts and appeals to all mankind.

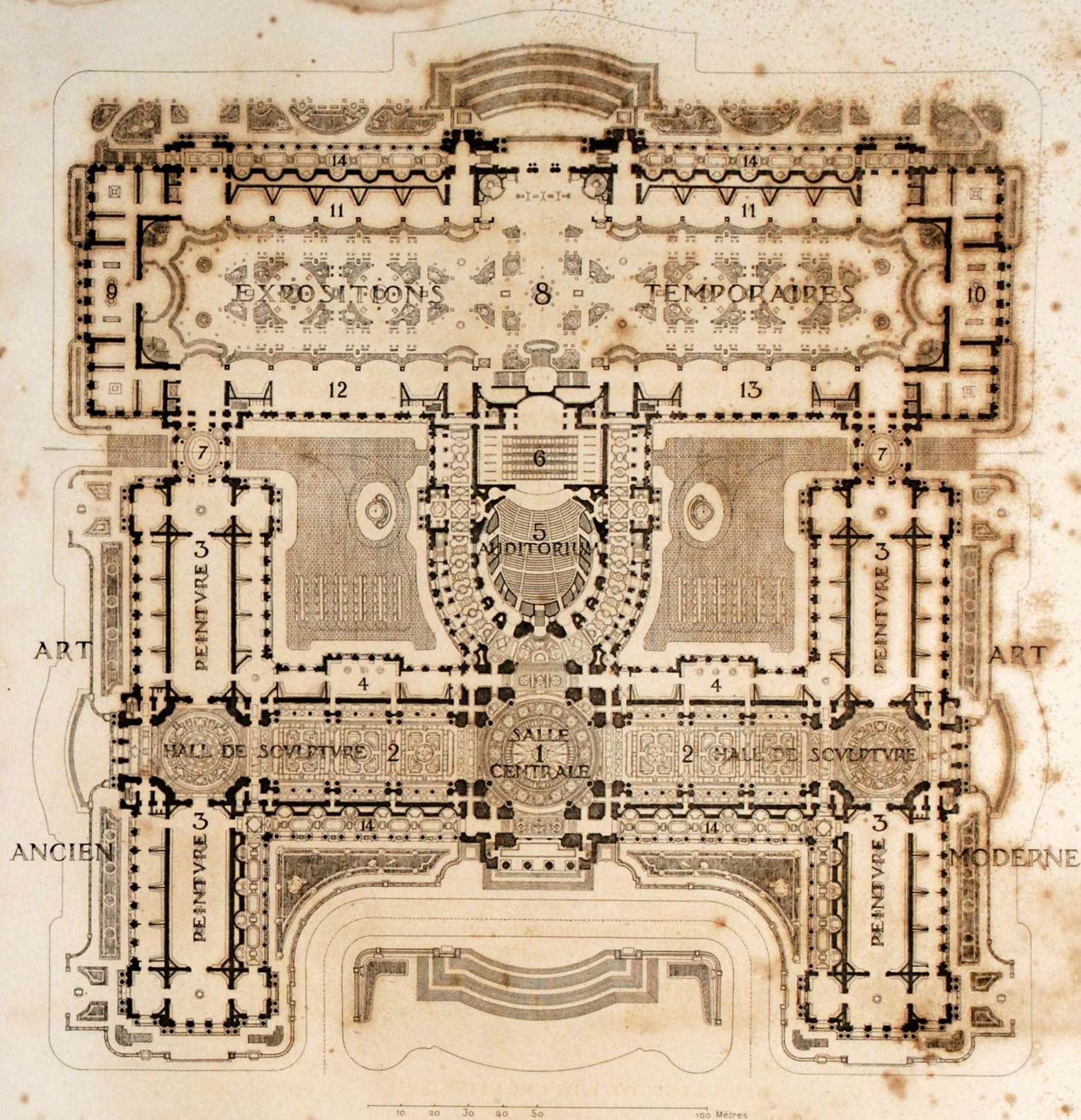
The glorious achievements of men in the past, their high aspirations expressed in colour and form, their symphonic dreams of melodies that arouse and elevate the soul, their noble, inspiring songs of praise and love, must be brought together to enrich our future, and to strengthen our desire to infuse a new life of nobility and purity into every part of the mighty, world-embracing figure of humanity. The more appealing are the arts, the nearer they approach divine truth, — a truth which lives within the soul of every living creature, and which when interpreted through the genius of the artist, unites humanity and uplifts its soul to a clearer vision of God.

It is through the arts that the Divine in humanity becomes more defined. It assumes more harmonious proportions, more righteous animation, more precision of purpose. Therefore the harmonious merging of the arts in one another is urgently needed for the righteous fulfilment of a divine mission that appeals to all men throughout the world.

High achievements in painting and sculpture, music and the drama have often become national heirlooms, which not only show great technical ability in producing form, colour and sound, but also convey the deeper religious and moral inspirations of the time in which they were conceived. For the artistic genius, to say nothing of his exquisite technique, seeks to gather up and objectify the noblest ideals of his age, and bequeaths to mankind divinely beautiful creations.

But it is now becoming necessary for artists to unite in the larger field of a more world-embracing mission with a broader horizon than the national one. The artist cannot always produce his best work in his fatherland; he needs to study the whole world of human sympathies, and incorporate them in his work. His task becomes grander as his aims widen out through unity of endeavour and purpose, and it may safely be said that no true artist in sculpture or painting, in architecture, the drama, literature, music, poetry or design, feels himself bound or hampered by state laws, social obligations, religious rules or motives. The painter, sculptor, dramatist, musician, as well as the architect, poet and writer are all forced to

PLAN OF THE TEMPLE OF ART



1. — GREAT CENTRAL ROTUNDA UNDER THE DOME.
2. — PERMANENT SCULPTURE GALLERIES.
3. — PERMANENT PAINTING GALLERIES, DRAWINGS AND ENGRAVINGS.
4. — DRAWINGS OF ARCHITECTURE, DECORATIVE ARTS.
5. — AUDITORIUM HOLDING FROM 3,500 TO 4,000 PEOPLE.
6. — STAGE. (Artists' rooms above the side galleries).
7. — HALLS CONNECTING THE PERMANENT MUSEUMS WITH THE TEMPORARY EXHIBITION GALLERIES.

8. — TEMPORARY EXHIBITION GALLERIES.
9. — ROOMS FOR ARCHITECTURE AND DECORATIVE DESIGN.
10. — ROOMS FOR ENGRAVINGS AND DRAWINGS.
11. — ROOMS FOR MEDAL ENGRAVING.
12. — SPACE FOR CAFÉS AND RESTAURANT.
13. — SPACE FOR CONFERENCES, RECEPTIONS, ETC.
14. — PORTICOES WITH MONUMENTS TO THE GREAT ARTISTS

Painting Exhibitions upon the first floor.

A-B. — Courtyards leading to the Auditorium, with exits below 7. Into these courtyards would open the cafés, buffets, deposit rooms, repairing and casting rooms, etc.

another, and they point definitely to the necessity of a permanent centre, where the highest achievements could have a place given them by a world sanction; where the musician could offer his symphonies and operas, assured of a hearing as well as of an impartial judgment; where the dramatist could present his work, with the certainty that, having passed an international jury, it would be worthily set and represented.

This Temple, dedicated to "the Creative Spirit of God in Man" would thus be of world-wide utility. It was conceived as a means of bringing together to a common centre all the creative talent of the world, and of disseminating its reproduction readily and rapidly throughout all lands.

It was also conceived as having practical surroundings in order to offer, in schools built for the purpose, the most advantageous means of acquiring technical knowledge of the arts of painting, sculpture, and architecture, as well as of music and the drama. Here men and women could meet from all parts of the world in order to devote themselves to the acquirement of technical knowledge in the various branches of art, in the very bosom of an international centre, where the world's masterpieces would afford a continual stimulus to their efforts.

DESCRIPTION OF THE TEMPLE OF ART

The Temple of Art here presented is designed to house under one roof all the highest expressions in the drama, music, painting and sculpture from all countries. It covers a regular quadrilateral, of which each side measures over 250 metres. It contains : an immense *Auditorium* in the centre, two Permanent Sculpture Galleries in front, two Permanent Picture Galleries at the sides and immense Temporary Exhibition Galleries at the back. All these are in direct communication with each other. At the summit of a flight of steps, behind four tall and massive columns, and beneath a sculptured pediment, is the front entrance facing the Fountain of Life. Above the columns and under the pediment runs the dedicatory inscription :

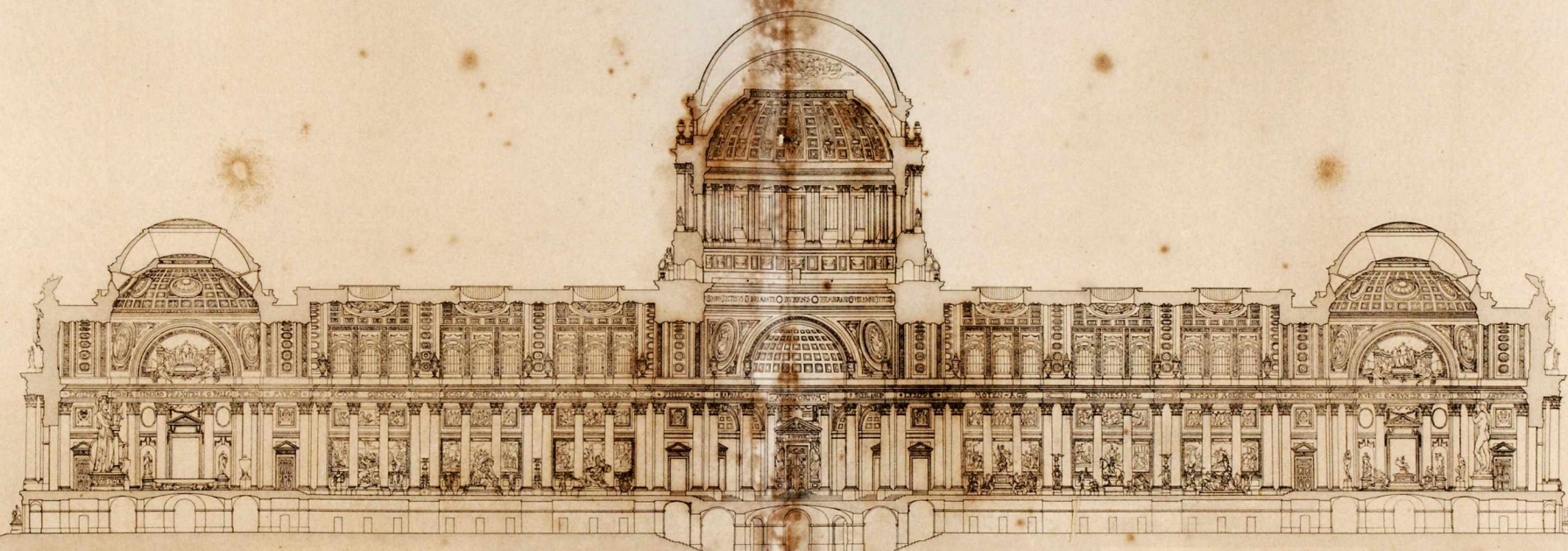
DEDICATED TO THE CREATIVE SPIRIT OF GOD IN MAN

The *Auditorium* forms as it were the heart of this great group, and is in itself a colossal musical instrument. All the aid that science can give is required for the construction of an *auditorium*, which must be the result of the most minute study in line and detail. Therefore in planning the interior of this vast hall two essential points were taken into consideration : sound and the beauty of harmonious form. In regard to both, all the great



TOILE
MUSEE DE PEINTURES
Ecole des Beaux-Arts
TEMPLE DES ARTS
ADMINISTRATION
BIBLIOTHEQUE
CONSERVATOIRE DE MUSIQUE
ERNEST H. HERRARD
ARCHITECTE

ELEVATION GENERALE CENTRE ARTISTIQUE



ART ANCIEN
GALERIE DE SCULPTURE

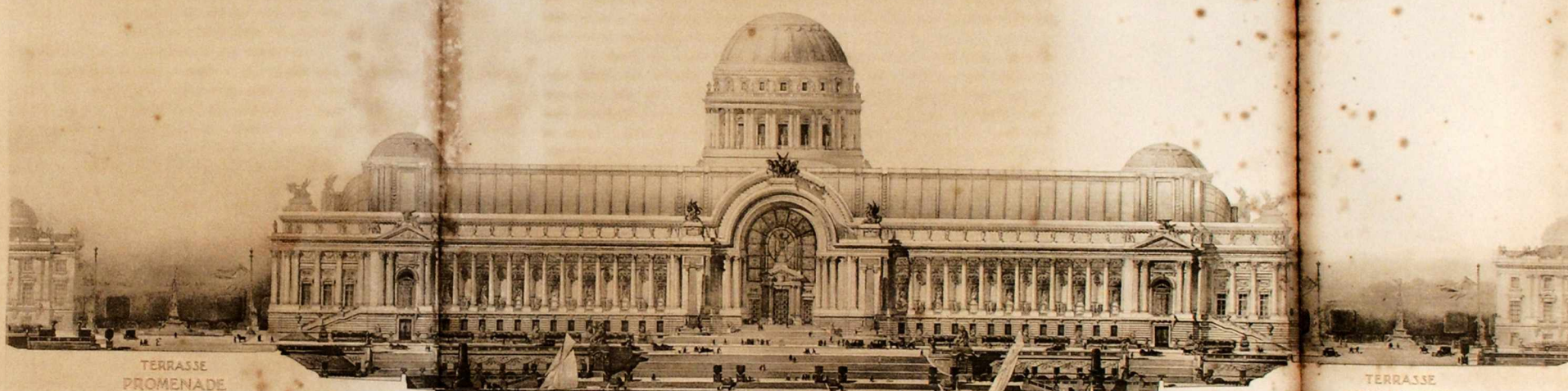
SALLE CENTRALE

ART MODERNE
GALERIE DE SCULPTURE

10 5 0 10 20 30 40 50

ERNEST. M. HEBRARD. ARCHITECTE

COUPE LONGITUDINALE SUR LE TEMPLE DES ARTS



TERRASSE
PROMENADE

COUPE SUR LE CANAL

TERRASSE
PROMENADE

ERNEST M. HÉBRARD, ARCHITECTE

ÉLEVATION DU TEMPLE DES ARTS SUR LE GRAND CANAL

theatres hitherto built in any country were considered. The hall was accordingly conceived in the shape of an immense, almost semicircular amphitheatre, prolonged in the rear into a wide and deep stage, sufficiently large to afford adequate space for performances of any magnitude. The orchestra is invisible being below the level of the stage. Curving tiers of seats, capable of holding between three and four thousand people, rise almost to the height of a circular row of columns, which support with their gold bronze capitals a low and softly lighted dome. Everywhere the grandeur of strong simple lines has been aimed at, so that the eye and mind, undistracted by small detail, may be wholly concentrated upon the performance. The practical problems of seating as large an audience as might see and hear to the best advantage, and of allowing ample space for free and rapid circulation have been carefully studied; and in the desire to create a centre purely and simply for the highest artistic attainments of humanity, the object has been to give this palace a certain religious solemnity, such as we might suppose brooded over the Temple of Solomon.

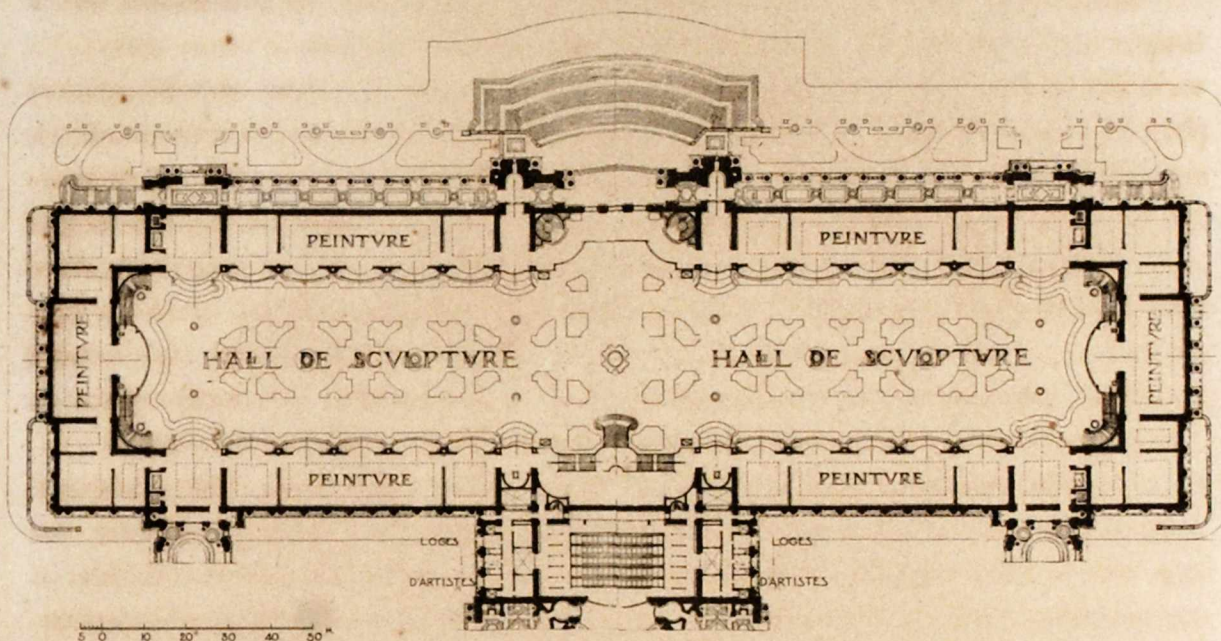
Although this *Auditorium* is in the midst of the main building, care has been taken not to leave it imprisoned between walls. There is a wide semicircular lobby surrounding the great hall, to provide a promenade for the audience during *entr'actes*, connected with two courtyards at the sides as well as with the great main entrance in front and with the Temporary Exhibition Galleries at the back. Two arches under passages that connect the Picture Galleries with these last, furnish an exit from the courtyards. Therefore, however large the audience may be, the vast hall can be filled or emptied with safety in a few moments.

From the *Auditorium* the main entrance is reached through a spacious Rotunda, above which a dome, springing from a circular colonnade of polished marble rises to the height of 80 metres. This *Rotunda* is the connecting point between the great divisions of music and the drama, painting and sculpture. It is conceived as a sort of *International Pantheon* in which the names of all those who have enriched the artistic patrimony of the world might be inscribed. Four great doorways permit of free circulation. The main entrance and the door to the *Auditorium* face one another; the other two lead into the Sculpture Galleries which, to right and left, occupy the whole façade of the Temple of Art.

After a careful study of the practical requirements of a museum, the writer has endeavoured to provide an edifice worthy of its contents, without sacrificing the latter to the exterior. There are three interior divisions based upon three distinct categories of works of art : statues, large paintings and small paintings. Different types of rooms have been arranged for these three styles of work.

The arrangement of the interior of a museum, like the planning of an *auditorium*, is one of the most delicate problems that an architect has to

are placed around the former. This is the system which has been adopted, by dividing each of the side wings into three aisles separated by walls. A great central aisle, much wider than the other two, and without partitions, receives a full light from the top. The side aisles, divided into square rooms, are lighted by windows. Thus, whatever system of classification may be adopted, the several categories of work can find the space and light required to show them to the best advantage. The two smaller Rotundas form the



TEMPORARY EXHIBITION GALLERIES. — PLAN OF THE FIRST FLOOR

centre of these two great Permanent Picture Galleries, which are at right angles to the Sculpture Galleries, and project forward as far as an avenue that separates the Temple from the Fountain of Life and the Schools, and backwards as far as the Temporary Exhibition Galleries.

Connected at four points with these rooms for paintings and with the lobby of the Auditorium, the building for Temporary Exhibitions which occupies the whole rear of the Temple of Art, can be made entirely independent. It has its own front entrance as imposing as that on the front façade : a simple but majestic arch above a wide flight of steps. In the large central hall permanent partitions have been purposely omitted, in order not to impose a classification which might not always correspond to the requirements of the moment. As each temporary exhibition has its own character and may contain very different objects, its organisation in detail cannot be determined beforehand. The principal consideration has been to make the building so vast and so well lighted as to show off to advantage all the kinds of artistic works exhibited. The great rectangular hall in the centre is reserved chiefly for sculpture. Partitions, however, might be put up, whenever desirable, so as to allow for the hanging of very large pictures.

solve. Whatever the magnificence of a badly constructed building, the works of art cannot be classed in it as they should be, and are therefore in danger of not being properly appreciated. Many of the most famous productions are to-day housed in galleries that were never intended to receive them, having been built long ago as palaces for court and state functions. Often the light is poor and inappropriate and the shape of the rooms unsuited to the treasures they hold.

Moreover, the defective organisation of some of the largest Museums no longer corresponds to the methodical and scientific spirit of our times. A well divided edifice provides a place for each kind of object exhibited, and prevents the sacrifice of one for another. Whatever system of classification may be chosen, whether according to epochs or schools, subjects or technique, the general requirements remain the same. Large sculptured figures originally intended for the open air, and placed under cover for protection, need the maximum of day light. Such groups or single figures are seen to best advantage standing freely in wide ample spaces; in this way spectators, moving easily about, lose none of the fine proportions of the work.

Therefore, to allow for the maximum of space and for the fullest play of light, the Sculpture Galleries have been made very long and wide and without interior divisions. Two rows of columns, at regular intervals and near the walls, support a high glass roof. Occupying the whole façade of the building these galleries terminate at each end in a circular hall crowned by a smaller dome. Thus in the centre of the hall, large works standing isolated and liberally spaced can appear in their full beauty and without confusion. Smaller figures and groups that need a background, and yet lose in interest by being backed by a wall, if placed in the vicinity of columns can be seen to good advantage, and from several points of view. A very large space thus flooded with light, allows of a simple arrangement whereby the works may be enjoyed and understood to the full. In appointing, however, certain rooms for statues and others for paintings, there was no intention of keeping the two kinds of work studiously separate from each other. Certain indoor sculptures of a small or medium size may be better placed in the picture halls than in the two vast and strongly lighted galleries destined for open air sculpture. Some may be better seen isolated in small rooms. Carved and chiselled ornaments and furniture may well be placed in rooms set apart for paintings of a corresponding style, which afford a complete presentment of the taste and spirit of a given period.

With paintings the ideal arrangement is that the canvasses should hang in a single row. Small pictures need to be seen at close range and require a series of small, sometimes even very small rooms, receiving light preferably from windows. Large pictures in order to be seen from a sufficient distance, require wide galleries, with plenty of space, and well lighted from the top. There is no difficulty in grouping these large and small rooms if the latter

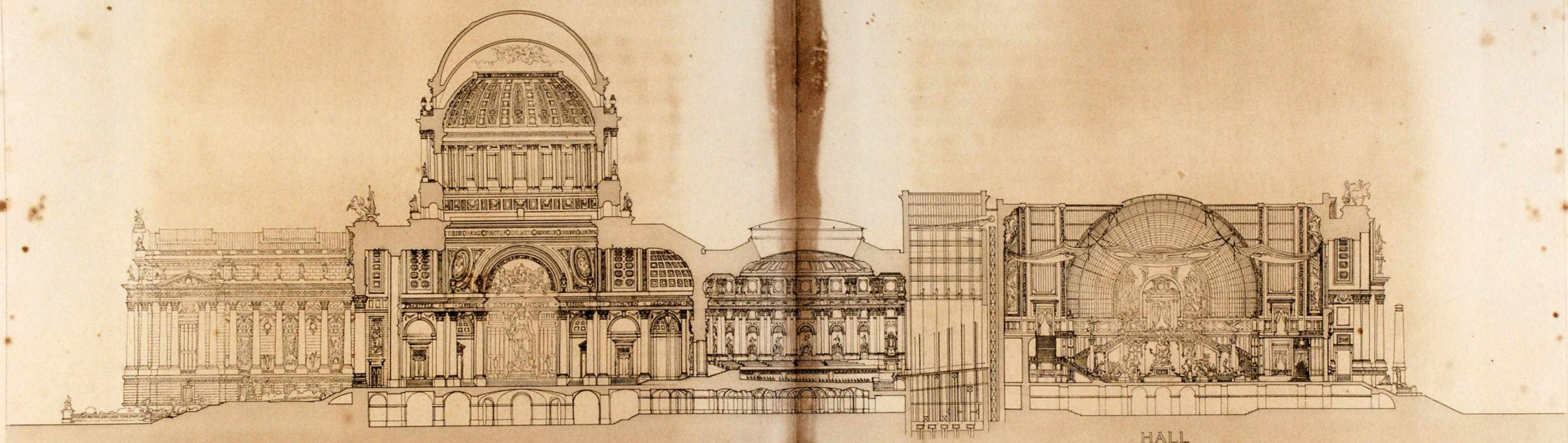
As a rule the wide apses at the two ends of the gallery would suffice for paintings and drawings. As will be seen at a glance, these Temporary Exhibition Galleries were planned upon colossal lines designed for large international exhibitions of art, with every arrangement for ample space and light, and for uniting the many smaller rooms into a harmonious whole. Broad staircases and spacious lifts connect the ground-floor with the upper. There is a restaurant, as well as tea-rooms and smoking-rooms, and no pains have been spared to create a Salon worthy of becoming a permanent world centre for temporary exhibitions of the art of all nations.

These three divisions : for Music and the Drama, Painting and Sculpture, and for Temporary Exhibitions, unite under one roof all branches of the highest creative arts, that bring before the eyes and soul of man, as it were the body and voice of his own spirit, in so far as he has hitherto succeeded in embodying it in perfected form. The Temple of Art was thus conceived in order to draw from humanity the grandest works of genius and in the course of planning its spacious halls, monumental *auditorium* and dome, surrounded by columns of polished granite and coloured marbles, the idea of expansion naturally grew up, and took the form of Schools for practical education.

Separated from the Temple by a wide avenue, like two wings majestically leading up to it, and folding between them the Fountain of Life, we find upon the plan, on the right : a Conservatorium of Music and the Drama, with a neighbouring Art Library; on the left : a School of Painting, Sculpture, Architecture, Engraving and Decorative Design, with an adjoining Museum of Casts. The monumental façades of School, Museum, Conservatorium and Library form a continuous line, decorated by colonnades and small domes culminating in the great central Palace, whose exterior and interior correspond in their strong simplicity. A colonnade almost surrounds it, and each column is intended to support, above the cornice, the statue of one of the great creators in any of the branches of art, the whole thus constituting a silent company of the great men of all nations, who by their genius have contributed to what there is of harmony and beauty in the world. Wide steps lead up to the great front entrance under the sculptured pediment; above it, the curve of the huge dome over the rotunda rises lightly against the sky. The firm line of the cornice above the columns surrounds the building, swells in a semicircular arch over the central entrance of the rear façade, and gives to the whole a strong sense of unity. The two wings of the Picture Galleries project forward towards the Conservatorium and School. The entire group is treated as a single whole, spreading from the Fountain of Life, and set in the midst of a variety of gardens presently to be described.

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At Paris, France, on the 10th of May 1904

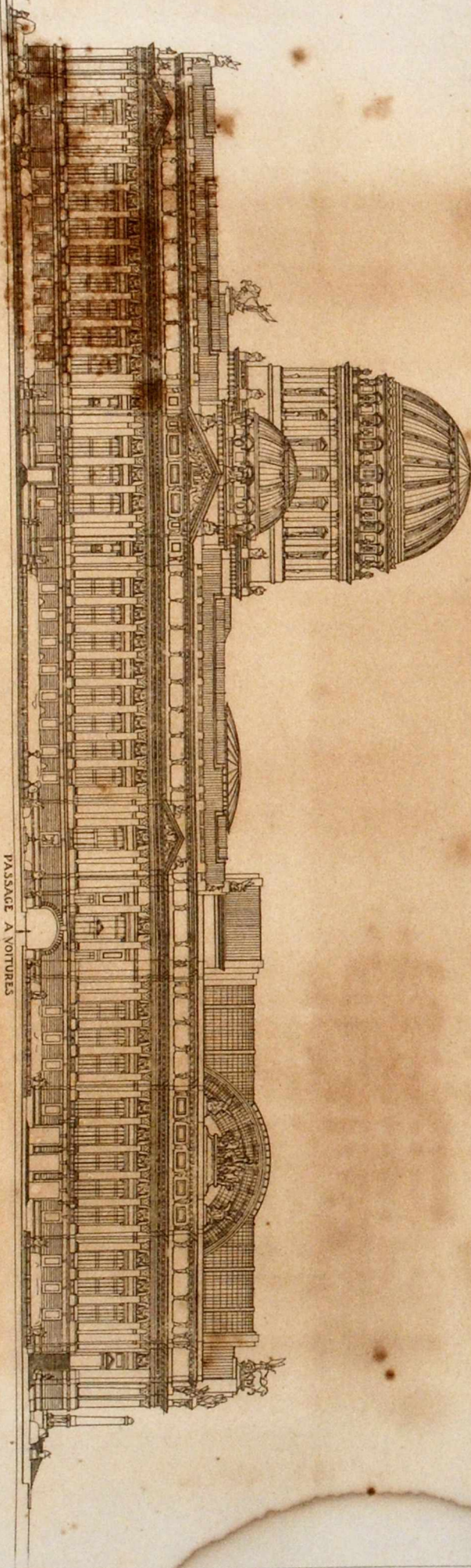


COTÉ COUR D'HONNEUR SALLE CENTRALE AUDITORIUM SCENE HALL EXPOSITIONS TEMPORAIRES COTÉ JARDINS

0 10 20 30 40 50 M

ERNEST M. HÉBRARD, ARCHITECTE

COUPE TRANSVERSALE SUR LE TEMPLE DES ARTS



ART MODERNE

EXPOSITIONS TEMPORAIRES

10 0 10 20 30 40 50

FAÇADE LATÉRALE DU TEMPLE DES ARTS

CONSERVATORIUM OF MUSIC

The Conservatorium of Music stands with its principal façade facing the Fountain. In front runs a large gallery serving as a promenade. At the two ends are pavilions. One of these is planned to lodge an Historical Museum of Music. In the centre a spacious vestibule has immediate access into the lobby of a theatre or small *auditorium* capable of seating some 1500 people. This theatre was designed in order to give a public hearing to all the best works produced by the students in symphony, opera or the drama. Moreover the student of the drama might here have the opportunity of hearing from time to time the works of the great world dramatists, as well as concerts and operas, thus enabling him to become familiar with the earliest as well as the most modern masterpieces in both arts.

Three groups of buildings in the rear, forming a quadrangle, and reached by a large corridor, contain Conference Halls, Lecture Rooms and Professors' Studies.

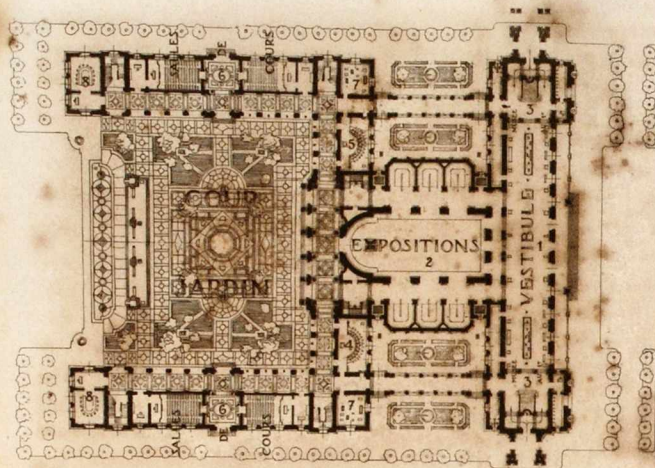
The Students' Work-Rooms are not in the principal building but in the gardens laid out in the rear. In accordance with a principle now generally adopted in all institutions of higher learning, the students' tranquillity and freedom are ensured by separating their studies from the building in which they unite for lectures, teaching, rehearsals, etc. Two groups of work-rooms face one another amid sheltering foliage, beyond the avenue which runs in the rear of the schools. One is reserved for students of singing, the other for students of the drama. The students of instrumental music have a special building on the left of the Conservatorium.

Not far from these, and set in a natural background of foliage, with a row of columns in front, there nestles in the greenery an amphitheatre for the production of music and the drama, somewhat on the lines of, and inspired by, the ancient Greek theatres. Close to the side door of the Temple on the left is a Conference Hall, dedicated to public lectures.

FINE ARTS LIBRARY

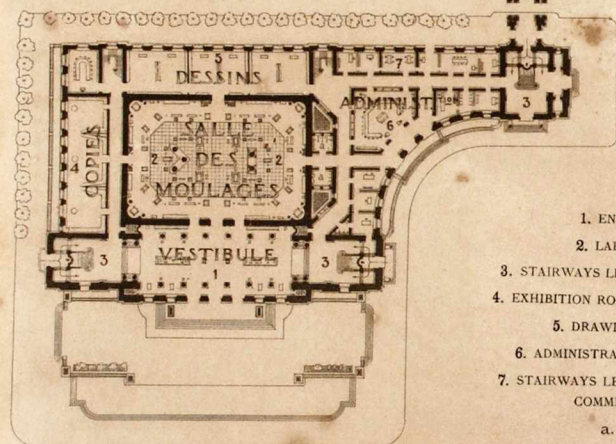
The Fine Arts Library, intended to contain as complete a collection as possible of musical and dramatic compositions as well as of works dealing with all branches of the Fine Arts, is placed on the other side of the Conservatorium of Music. It is a rectangular structure, with a wing extending forward as far as the Conservatorium. The centre of the building is occupied by a very large, oval-shaped reading-room, surrounded by fire proof store-rooms. A spacious rectangular room adjoining the reading-room is intended for

SCHOOL OF FINE ARTS AND MUSEUM OF CASTS



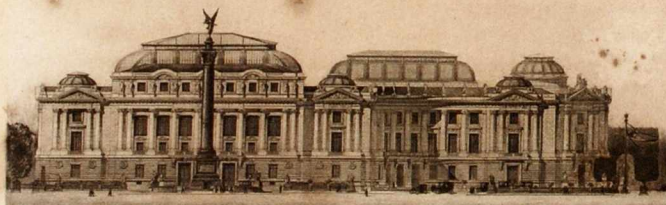
SCHOOL OF FINE ARTS

1. VESTIBULE
2. EXHIBITION HALLS
3. STAIRWAYS LEADING TO THE HALL OF PAINTINGS
4. ROOM FOR DRAWING
5. MODELLING ROOM
6. CLASS ROOMS
7. MODEL ROOMS
8. FACULTY MEETING ROOMS



MUSEUM OF CASTS AND ADMINISTRATION

1. ENTRANCE VESTIBULE
2. LARGE HALL OF CASTS
3. STAIRWAYS LEADING TO EXHIBITION ROOMS
4. EXHIBITION ROOMS FOR COPIES OF PAINTINGS
5. DRAWINGS AND ENGRAVINGS
6. ADMINISTRATION, SECRETARY'S OFFICE
7. STAIRWAYS LEADING TO TRUSTEES' OFFICES, COMMITTEE ROOMS, ETC.
- a. TOILET-ROOMS



FAÇADE FACING FINE ARTS SQUARE

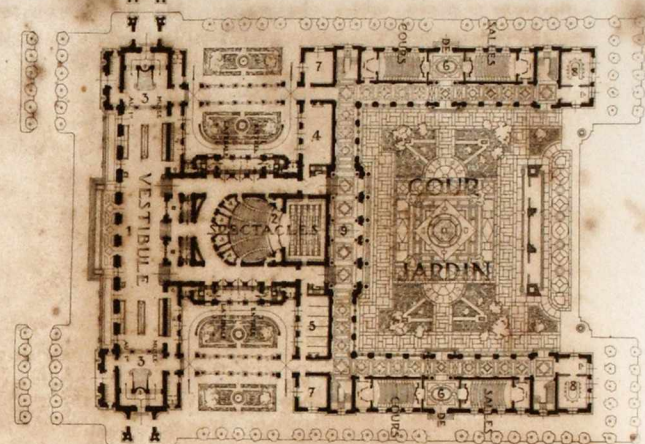
ELEVATION MUSEUM OF CASTS AND ADMINISTRATION

ERNEST M. HÉBRARD, ARCH.

CONSERVATORIUM OF MUSIC AND LIBRARY

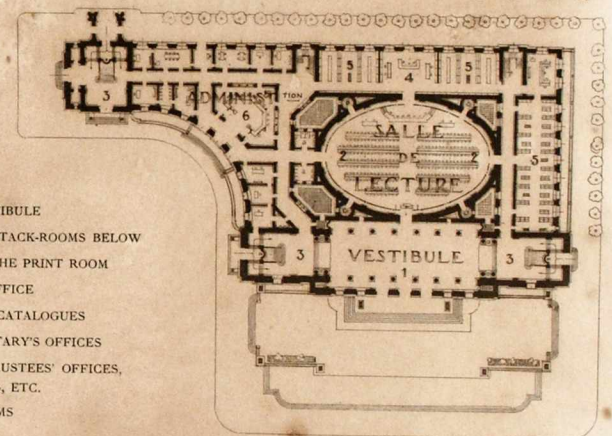
CONSERVATORIUM OF MUSIC

1. VESTIBULE
2. THEATRE
HOLDING 1 500 PEOPLE
3. STAIRWAYS LEADING TO THE LOBBY
4. STUDENTS' LOBBY
5. SCENERY STORE-ROOM
6. CLASS-ROOMS
WITH SMALL STAGES
7. RECEIVING ROOMS
8. FACULTY MEETING ROOMS
- a. DRESSING ROOMS
- c. LATERAL STAIRWAYS TO THE THEATRE



LIBRARY AND ADMINISTRATION

1. ENTRANCE VESTIBULE
2. LARGE READING-ROOM WITH STACK-ROOMS BELOW
3. STAIRWAYS LEADING TO THE PRINT ROOM
4. LIBRARIAN'S OFFICE
5. BOOK DEPOSIT ROOM, CATALOGUES
6. ADMINISTRATION, SECRETARY'S OFFICES
7. STAIRWAYS LEADING TO TRUSTEES' OFFICES, COMMITTEE ROOMS, ETC.
- a. TOILET-ROOMS



ELEVATION OF THE ART LIBRARY AND ADMINISTRATION

ERNEST M. HÉBRARD, ARCH.



FAÇADE FACING FINE ARTS SQUARE

collections of prints, tables, charts, etc. The whole projecting wing, divided into administration offices and school annexes, ends with a curving colonnade facing the Fine Arts Square.

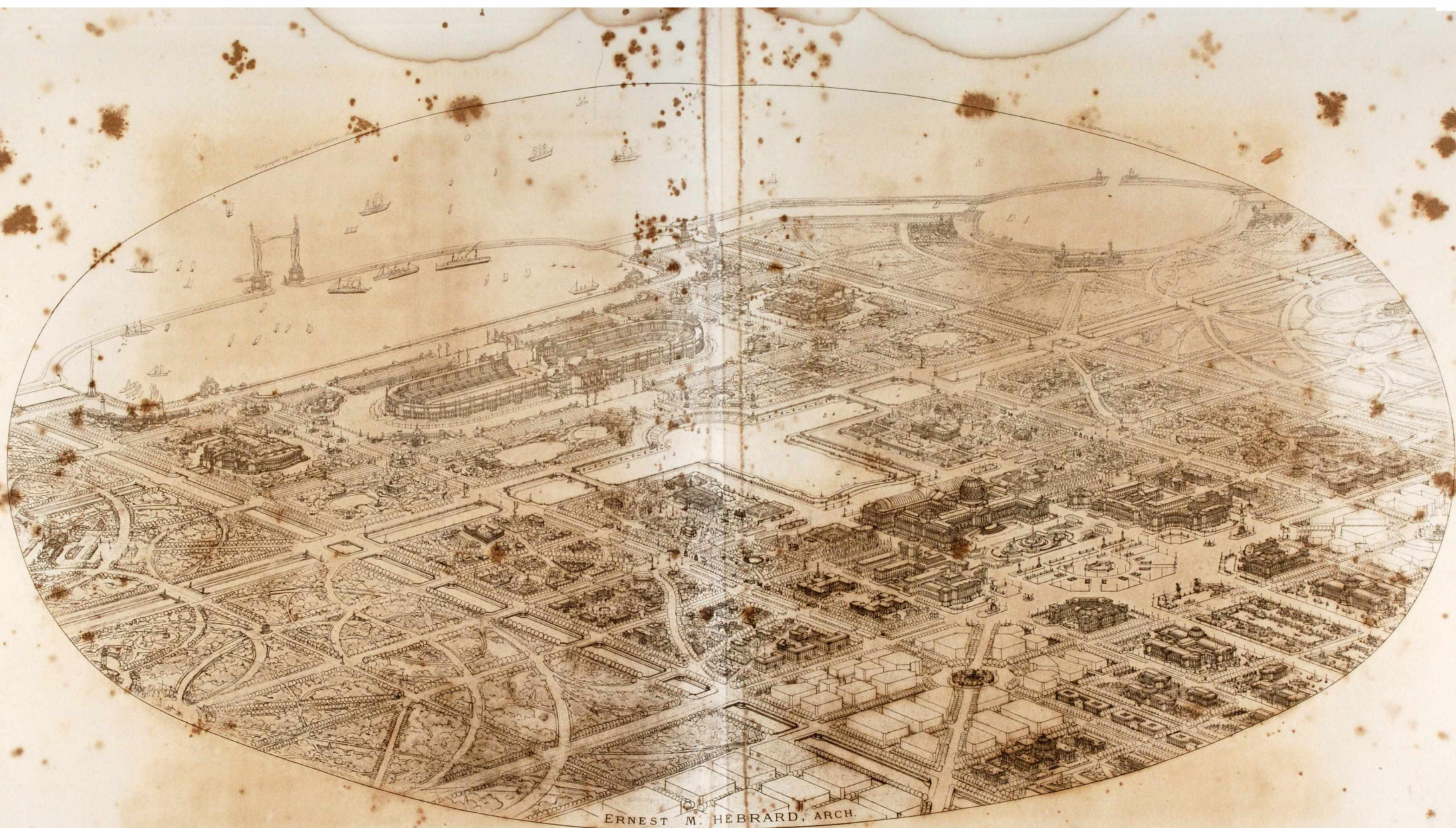
THE SCHOOL OF FINE ARTS

Resembling the Conservatorium of Music in form and in plan, the School of Fine Arts differs from the former, in that the centre of the building is occupied by a large Exhibition Hall instead of a theatre. A broad gallery, which will be richly decorated with bronze and marble copies from antique and modern works, leads directly to the Exhibition Hall, which is intended for competitions and other contests; to this the public will have free access. Class-rooms, ample lecture-rooms, professors' rooms and a thoroughly modern amphitheatre for the scientific study of anatomy, — all well lighted — are provided in the buildings surrounding the large square court at the back, and are reached by a wide corridor.

To secure the same tranquillity and privacy for the students of art as for those of music, the work-rooms are set apart in the gardens. To the left are those of the architects and decorative artists, to the right those of the painters, sculptors and engravers. A third group of work-rooms occupies a long building to the right of the School; these are the *loges* where artists may be isolated during important competitions. Corresponding to the Open-air Theatre, a School of Painting offers students the advantage, when the weather permits, of working directly from life in the open air. Two small buildings on either side of the Temple of Art, forming as it were the attachment to the great wings of learning, are designed for students' meetings, receptions, etc., so that the centres of study need not be invaded nor the students deprived of a place of assembly.

MUSEUM OF CASTS

Corresponding to the Library which it faces, the Museum of Casts, an indispensable adjunct to a School of Fine-Arts, has a similar projecting wing. The interior of this wing, like that of the Library is divided into administrative offices and annexes. The body of the building is constructed in the style usual to Museums. It consists of a large central hall for sculpture, and of narrower galleries surrounding it for exhibitions of drawings, engravings, etc. The large vestibule and main hall, well lighted and easy of access, are intended to house the best casts of the most important sculptures, which, illustrating the progress made in this form of art in Assyria, Egypt, Greece, Rome, the Renaissance, etc., will offer to the student every opportunity for studying and copying ancient works.

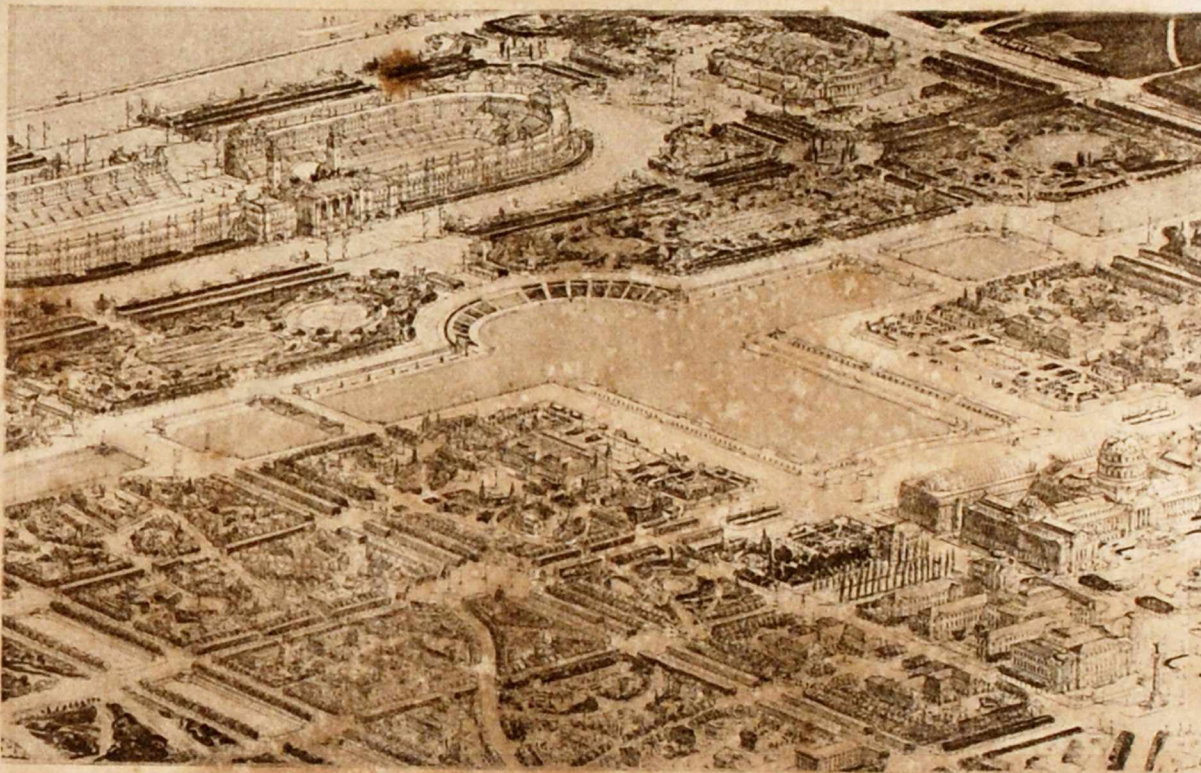


AN INTERNATIONAL WORLD CENTRE
VUE PERSPECTIVE DES CENTRES ARTISTIQUE ET OLYMPIQUE

In preparing the plan of this Art Centre every effort has been made to secure a symmetry in its proportions, its outer lines and decorations, corresponding to the unity of purpose dominating the whole, and at the same time to offer a practical solution for the modern study of art in all its aspects in the most ideal and advantageous surroundings.

GARDENS

The Gardens surrounding this Art Centre and connecting it in the rear with the Olympic or Physical Culture Centre are not conceived merely as a



THE GRAND CANAL

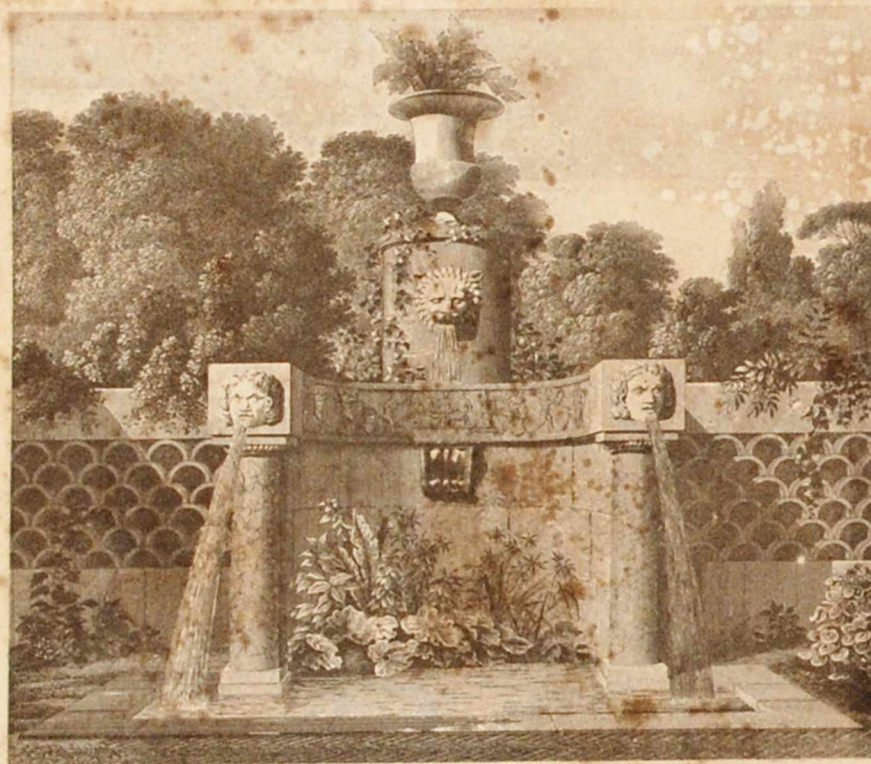
decorative setting, but are arranged to be of direct use to the artist, and of interest to the general public.

On either side, separated by avenues and easily accessible, Botanical and Zoological Gardens are carefully planned to give the student an opportunity of studying plants and animals of artistic value in form and colour. Practical, scientific arrangements have been considered for housing the animals so that they may be seen and studied as nearly as possible under the conditions of their natural surroundings. Such gardens as allow them the appearance of full liberty have been taken as models. An Aquarium and Aviaries for land and water birds have been given their appropriate setting.

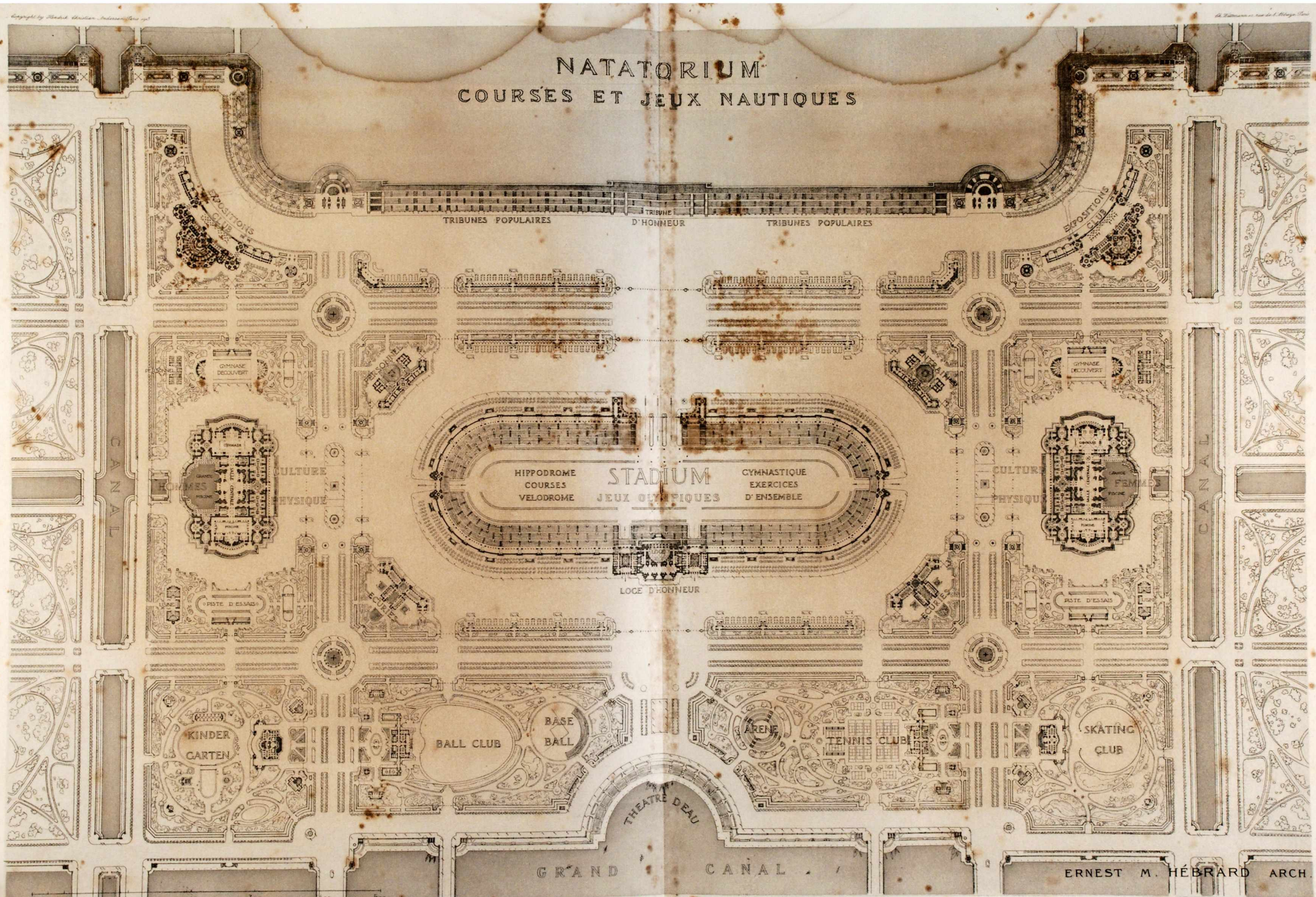
A broad T shaped Lake, or Grand Canal, occupies the centre. Terraces,

marble steps and landings lead down to its waters which afford ample space for pleasure boats, canoes and gondolas, and which crossed by ornamental bridges, connect the canals that bound the International Centre on the right and left. The rear façade of the Palace of Art is reflected in this mirror; and on its opposite side semicircular tiers of seats form a Water-Theatre for nocturnal spectacles and illuminations.

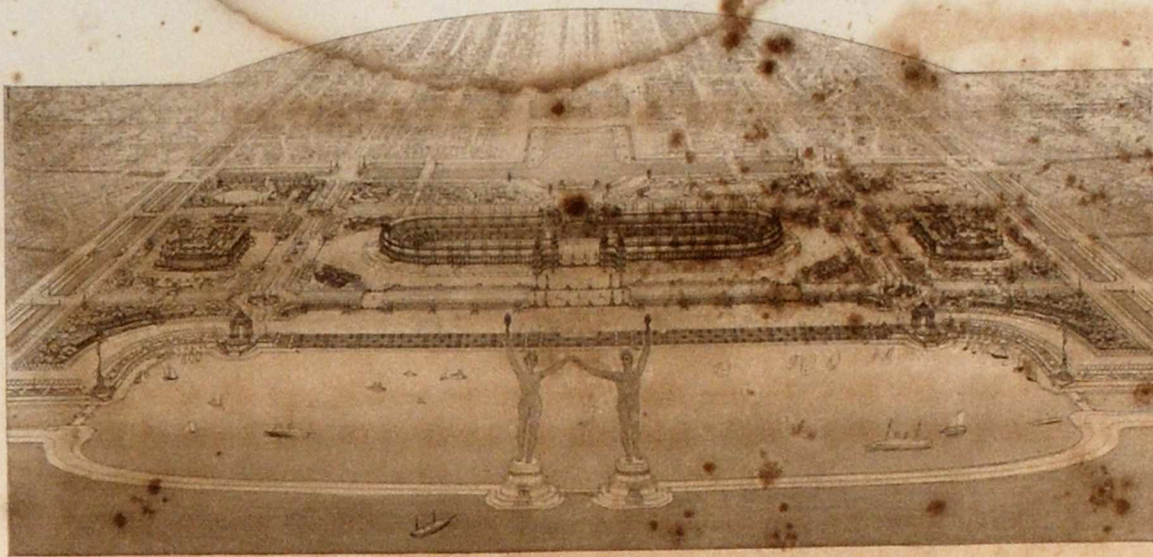
A Natural History Museum, on one side of the Lake, and very large Green-Houses on the other, facilitate a thorough study of plant and animal life in their relations to art, and broad avenues traversing the grand canal by bridges lead up to the Physical Culture Centre which forms not only a desirable addition, but a practical necessity.



NATATORIUM
COURSES ET JEUX NAUTIQUES



AN INTERNATIONAL WORLD CENTRE
PLAN DU CENTRE OLYMPIQUE



ENTRANCE BY SEA TO THE OLYMPIC CENTRE

PHYSICAL CULTURE

OR

OLYMPIC CENTRE



ATHLETE

THIS Centre is designed to give an impetus to the development of the human body and to facilitate, through comparison, the attainment of ideal standards of strength, endurance and physical beauty. Therefore it was natural to conceive it as united to the Art Centre; for art and physical culture are by nature so harmoniously related and essentially bound together that the one cannot fully expand without the other. The perfectly developed body of man and woman become to the artist the foundation of his inspiration. When physical culture attained the height of perfection in Greece, Art, in all its branches, rose with it, carrying the imagination of philosopher and poet, painter, sculptor and architect, higher and higher into the realms of divinity. In spite of war's corruption and degradation, the aesthetic heights then attained will always serve as one of the most secure guides for the future progress of art and culture.

In a Permanent Centre for Physical Culture world-wide in its scope, such as is here monumentally planned upon a scientific basis, athletes from all nations could assemble, and the records of their varied achievements could be preserved. Measurements could also be taken of their physical

It is difficult to trace athletic development through those far away times. We can only be sure that men possessed great physical strength and endurance, but we have no records of any athletic ideals sought for or attained. We find stress laid upon the capacity to fight and to build. The rulers, it is true, enjoyed out of door sports, but this usually took the form of hunting wild beasts which were killed by the king while slaves and soldiers looked on respectfully.

In almost all these mural decorations the king or ruler is the dominating personage. As emblem of his spiritual power, often some winged figure soars protectingly above his head. To illustrate his strength and courage, he is sometimes represented in single combat with a ferocious lion. While rage and strength are seen in the lion's every feature and muscle, the king stands serenely with one outstretched arm grasping by the throat the king of the beasts, while with the other he thrusts a long dagger through its body. His slaves or assistants, burdened with shield and arrows, look calmly on or lead his favourite horse, and the artist seems not only to have intended to illustrate the fearless courage and superiority of the ruler over the animal, but also to glorify and exalt him among his followers and slaves. Thus we find physical strength, courage and endurance embodied in the rulers of men; whereas the labourers were mere instruments for building and warfare.

It may not be out of place here to draw attention to the wonderful ability shown by Assyrian sculptors in the representation of animals as well as of humanity. Great stress is laid upon the most prominent muscles, and the most marked features expressing brute force are carefully observed. Anger, excitement, suffering or despair are emphasised. All the lines are fine and decorative. The dying spirit and ferocious energy of beasts are forcibly shown by conventionalised, symmetrical forms, clearly cut and full of meaning. Animal life, doubtless very abundant in those days, was better portrayed than the human form. Though the study of the human body was never conspicuous in Assyria, yet the representation of animated animal life has never been surpassed and the Assyrians' sculptural accomplishments in this line stand alone, even to-day, unrivalled in realism, beauty of line, symbolism and decorative qualities.

Following the history of physical culture engraven upon stone, marble or cast into bronze, we are led from Assyria's high achievements to those of Egypt. The human body was to gain a more appealing recognition in the higher order of Egyptian works; but we also note that it was represented in sculpture only under rigorous religious rules that governed its exposure. Conditions of social life, aims and ambitions differed little in Assyria and Egypt. Man was still soldier and slave to his ruler. The duty imposed upon him was to build and to go to war. Greater and more solemn monuments of symbolic sculpture however, were created; more fantastic and gorgeous architecture

development, and every facility be given to promote healthy exercise in all its various forms. National games could be presented before international gatherings, a world record could be kept of all progress made and ideals would be created for the improvement of the race.

Such an international blending of physical culture would undoubtedly tend towards more harmonious relations and understanding between nations. Its value to health and high morals as well as the impetus that it would give to art and general culture can hardly be overestimated. Indeed a common, permanent meeting-ground seems essential for bringing together upon a secure scientific basis, all forms of healthy exercise.

It is true that occasional celebrations of Olympic Games are being increasingly encouraged by the nations. It is also true that this is done at vast expense. Immense stadia, temporarily constructed for this purpose, like the great buildings of International Exhibitions, fall into desuetude, and the records of achievements become scattered. Measurements and casts from life are not preserved in any such manner as might become of direct use to the world at large. Moreover, physical development itself is not yet cultivated in such a scientific manner as might definitely establish standards of health and beauty, with a full knowledge of the physiological laws upon which these so largely depend.

It may not be out of place here briefly to outline the history of physical development as observed through art and culture.

If we go back to the early ages of despotism, we find man physically strong, but cruelly and inhumanly treated, entirely dependent on kings and rulers. The wonderful Assyrian and Egyptian temples stand to-day as symbols of human strength and endurance. We look upon these vast walls, built of huge blocks of stone that resist the ravages of time and wars, with sympathy for the great human endeavour and for the silent, downtrodden slaves and prisoners who, lashed and poorly fed, were forced to give their lives to construct these almost superhuman conceptions. The testimony of their subjection to despotic rulers is graven upon these secular walls. Tall friezes of marvellous sculpture bear record with penetrating clearness to the vanity of the ruler and the suffering and entire subordination of the subjects. From the dim, blood-stained ages comes the appealing cry for light and liberty. A confused understanding of the creation and of the Creator is manifest in these symbolic sculptures. The spirit of God was barely dawning in man, and was only vaguely understood by the leaders. Men were obliged through fear to find the personification of God in the dominating power of monarchs even as children fear the shadow of some great object, mysterious in the night.

The history and ambition of these peoples are literally engraven upon their temple walls with as much naiveté and as clear and sharp an outline as our children's picture books of to-day.

body, they moulded into bronze and carved into marble. Poets sang its praises. Philosophers considered its development not only valuable, but indispensable to the inspiration of a healthy mind. The architect could not conceive his finest temples without decorating them with the noblest forms of human animation and activity.

Greek Sculpture was facilitated by a close study of the perfect development that man had attained through physical culture and exercise, which in this age reached the highest ideal. State and man were benefited. Body and mind grew stronger and more self-reliant. The great Olympic Games, the pride taken in them and the encouragement given them, prove in the clearest manner how keenly the Greeks felt the necessity of physical culture as essential to the fullest development of physical and mental effort. As a result, we find sculptured forms of humanity, representing man and woman in all the divinity of their natural beauty of form. These marvellous statues seem to have been moulded by the very hand of God into inspiring lines.

We find in the Venus of Milo, the ideal of feminine beauty and womanhood, as in the Doryphorus, of Polykleites, we find the masculine form at the height of symmetrical beauty. Polykleites studied and created the Greek ideal of an athlete. His Doryphorus, a marvellous conception of refined human beauty took, it is said, more than twelve years of labour, and during this time, he formulated the canons of human proportion.

Not only did the Greeks create a new ideal of beauty for the human limbs and trunk, but they designed heads that with their calm serenity and refinement express the very essence of intellectual beauty and dignity. The heads of Apollo and Zeus by Pheidias, and the celebrated heads of Hera, Athena, and others by Scopas are examples of this.

Physical culture brought about this pure perfection of form. A natural love for the divine human body filled the Greeks with a just enthusiasm. There is nothing mysterious in Greek art, but an aspiration after strong and ennobling ideals drawn directly from nature, infused with purity and refinement. Conscious of the fact that God has created nothing more wonderful than man and woman with their eternal mission of righteousness, Greek idealism formed truthful conceptions of divinity, drawn directly from the human form, with a deep understanding of the divine purpose of love, truth and purity for which the body was created.

As we follow the evolution of physical development, we find that the Romans adopted the noblest of the Greek ideals only to corrupt them and to drag them from the serene heights they had attained to the lowest degradation. Greek art, in spite of internal wars and political disturbances which were long and bitter, was in perfect harmony with the spiritual ideals of the whole people. But when the Romans conquered the country and subordinated the people they adopted the Greek art and religion, but could not support them by the same spiritual motives; thus the Greek works became a mere decorative feature and

was conceived and carried out. Monuments that defy time stand like solemn human mountains before us. One marvels at the mighty work of the human hand, and at the colossal conceptions executed with power and grandeur.

Realism in the art of portraiture was at times marvellous in Egypt. The Pharaohs and their Gods have a superhuman realism, often full of poetry and pathos and always imposing and rich with idealism. Here again the divine creative spirit of man is found feeling its way through confused ideas, pressing strongly onward and upward, infused with the desire to animate and elevate the surroundings to a sense of the presence of a divine power. The human energy, strength, courage and endurance which must have been required still remain a marvel. As we stand before these solemn symbols, their immensity and grandeur are almost overpowering, and it seems impossible to realise that they were conceived by the human brain and executed by the hand of man. Here we find a technical perfection that has never been surpassed. Although Egyptian sculpture did not depend entirely upon close study of the human body, it nevertheless indicates refinement and dignity in large harmonious lines. The absence, however, of any sculptured frieze illustrating physical culture and athletics, is everywhere felt. If practised, these were never made a science or considered essential to life and progress. The character of Egyptian work is energy — that energy that raised from the earth solid masses of stone and formed them into temples, statues and pyramids which yet defy time.

Passing from Egypt to the classic Greek period, we, for the first time in the history of art, come in contact with the human form so wonderfully conceived and proportioned that the masterpieces handed down to us will always serve to elevate the conception of humanity. Notwithstanding the great influence of Assyrian and Egyptian art, the Greeks soon found the sculptured gods of these nations less and less inspiring to their own natures. Instead of combining man and beast, they found in the human form, pure and simple, all that their conceptions of religious symbolism required.

In Greece, physical culture was not only found to be essential to the public health and to the morals of the State, but such a deep interest was taken in all out-of-door sports and games that the human body was brought to so healthy and well developed a condition that it served as model for the conception of gods. The highly developed human body served the sculptor and painter for the expression of their most beautiful and noblest religious ideals. It was used as a holy symbol and worshipped and praised by all. A divine meaning was found in its simple, harmonious development. They dealt with its symphonic, musical forms, and these, at the artist's touch, became sacred. Man, made after the image of God, was here given every opportunity to develop himself physically and mentally.

This great beauty which the Greeks found and worshipped in the human

figure of a strong man. Yet in spite of specially trained masseurs, and distinguished physicians who healed the wounded combatants, the Roman athletes did not become as beautifully developed as the Greek. Strength and courage were incited to destroy life until the body itself sank into vice and corruption.

But the very exaggerations of the Roman Empire have their meaning. By war and conquest the Romans gathered all that was of excellence into their capital and made there a central treasury of Beauty and Art. They became even over-rich by their robbery. But as without spiritual motive nothing can live, the body became overfed, overvoluptuous, vulgarly inhuman and degraded.

As we pass on through the Middle Ages, when the world had again become divided and subdivided under a multitude of rulers, we find that art was seldom inspired by strong, symmetrical forms. Under the powerful control of the Christian Church, the human body was disregarded, its perfect development not being essential to mediaeval ideals.

The new religion required the expression of self-sacrifice, humble devotion to ideals, emotional manifestations and marked a reaction in all expressions of physical development and vigorous beauty. By means of an exquisite technique, the whole range of human emotions was produced in art with a delicacy of touch and a depth of feeling that reveal the soul and penetrate the heart of humanity, nevertheless no general symbol of the human form was originated during the early Renaissance except that of the suffering body of Christ. With mortal anguish expressed in every limb and fibre, mutilated and bleeding, pale and lifeless, with arms stretched out upon the cross of iniquity and cruelty, this divine tragedy was reproduced again and again in bronze, marble, ivory, wood or colour. The painters and sculptors of the Renaissance in their realistic and carefully executed works, expressed the pathos of life. The human body was then a thing to be sacrificed, almost to be ashamed of and, hidden beneath folds of rich or poor material, tortured, burnt or tormented, as in immense remorse to expiate the past, as if the body did not belong to the soul, and were not conceived after the image of God.

We find that chaste refinement and immaculate conceptions were made to appeal to the emotional senses and the mission of life was changed into one of abnegation. Mental and physical suffering are traced in the delicate lines of painting and sculpture. Devotion and self-sacrifice are the dominating theme of high artistic achievements. Attachment to a new form of religion appealing to the soul, raised the standard of morals and created divine ideals that sent a thrill of reverence, fear and joy to the heart; but, with the exception of works by Michael Angelo and a few of his followers, no grand human forms were created. Indeed, we lose all direct trace of the abstract, ideally developed human body. We find instead light veils or heavy draperies serving to

only served to supply an ever growing craving for voluptuous vanity. Political ambitions changed the whole range of social life.

As all accessible parts of the inhabited world slowly fell into the power and control of the Roman Empire, success and greed mingled with personal vanity, ambition and cruelty, crushed the highest Greek ideals into distorted, disconnected forms. Success in the cruel subordination of other nations caused voluptuous vulgarity to sit upon the throne of art and a transformation took place in all branches of social life which induced people to look for material gain, while the God within was almost forgotten and the voice of the soul became silent.

As Rome, with its thousand occupations and ambitions, its innumerable disputes and wars, rapidly became the capital city of the world, the whole population was swayed like a troubled sea without time for quiet meditation, lashed by one emperor, caressed and pacified by another. Physical culture then took on another form.

The magnificent Colosseum, the huge Circus Maximus and the Baths of Caracalla rapidly answered a growing demand for amusement and recreation. "In three places", says Cicero, "is the voice of the Roman people most certainly heard: in city assemblies, in the Comitia and at the games and combats". At these last, people of all classes gathered in great numbers for their principal pleasure. "Anyone who would gain popular favour," says Dio of Prusa, "must get not only jugglers, actors and athletes, but wild lions or a thousand bulls or even, should he desire to please the mob, that unspeakable thing, gladiators". For training these, physical culture schools sprang up throughout the empire.

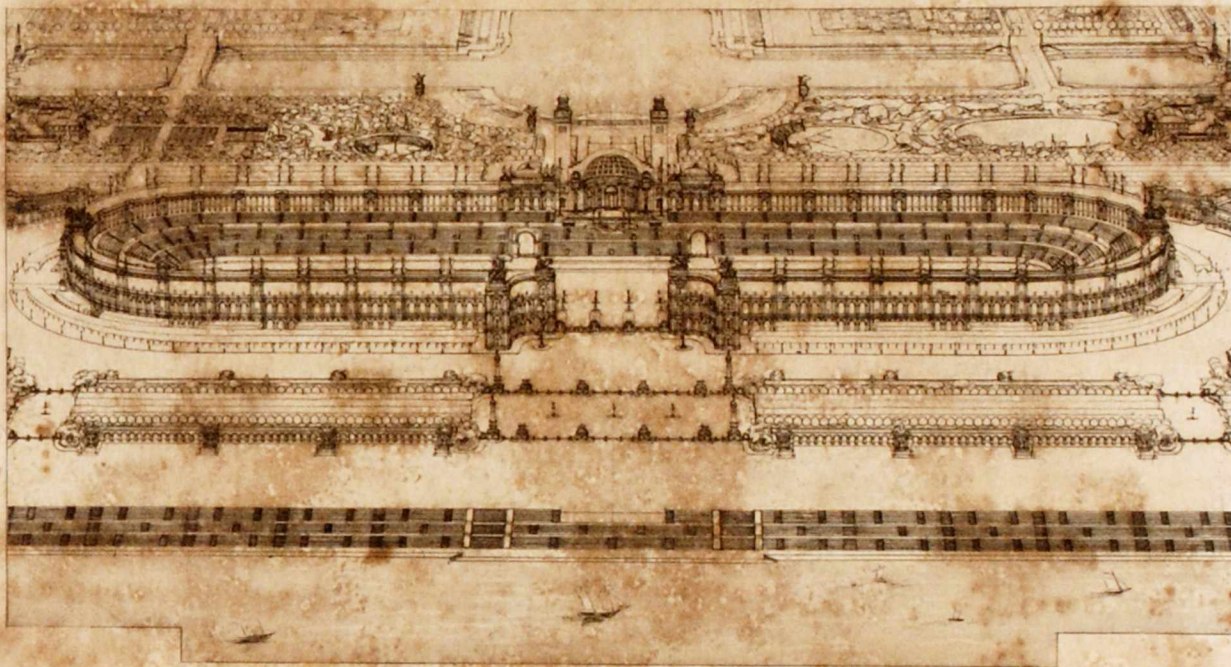
The Colosseum and the Circus Maximus within a short distance of one another, seemed to serve as lungs to which people flocked from the narrow streets to breathe and be amused. Here horses raced and were sold; gladiators fought singly or in large numbers, among themselves or with animals; slaves were tortured and given as food to wild beasts, Christians were massacred and publicly exhibited, in fact, every hideous form of cruelty was invented and practised to satisfy debased, unnatural desires. Wherever the Roman civilisation spread, there was the amphitheatre, carrying the same corrupt ideals that had originated and inspired it.

The Greeks in all their endeavours, struggled for an ideal and attained it. The Romans craved instead for cruel, vain diversion, and in these diversions the human body was contorted, even hacked limb from limb, devoured by ferocious beasts or burned to ashes.

Not that the Roman people were without feeling for the human figure, for, when Tiberius took possession of the celebrated statue of the Apoxyomenos, a masterpiece by the Greek sculptor Lysippus which Agrippa had placed in a theatre for his people, he was obliged by the mob to return it. This shows their pride in and appreciation of an ideally proportioned, nude

Its immense stadia and gymnasia for men and women offer innumerable ways and advantages for uniting and comparing the highest physical accomplishments of all nations, for studying the games that have led to the best development, for recording and preserving methods and measurements, for diffusing throughout the world the highest standards of efficiency, and for infusing into every human being the sense that strength and courage are essential elements to sustain a healthy, vigorous, productive life.

Every indication of the age points to a growing understanding of the essential need of physical development; to the necessity of endurance and self-reliance for the fulfilment of the task imposed upon humanity : — that of harmonious unification and fellowship.



PERSPECTIVE VIEW OF THE STADIUM

DESCRIPTION OF THE PHYSICAL CULTURE OR OLYMPIC CENTRE

As in the artistic centre a central temple was made in which to gather together those highest achievements in music, drama, sculpture and painting that concentrate and forever hold up to the eyes of the present and preserve for the future the permanent standards of beauty and the intellectual interpretations of life, and was surrounded with schools, conservatorium, library and museum, so an immense Stadium was designed as chief monument of the Olympic Centre and surrounded by Gymnasia.

This Stadium, in the shape of an immense rectangle 800 metres long ending in two semicircles, is arranged in tiers of seats divided by aisles.

emphasise established moral principles rather than to reveal divine conceptions of the body created by God.

In thus rapidly surveying the evolution of physical development, we see it rise through Assyrian life, change slightly in its transition through Egypt, reach on and produce the height of beauty and development in the immortal conceptions of the Greeks, fall into utter degradation under the Romans, never again to rise with the same purity of purpose. For many centuries it became subordinate, for though wars abounded, stress was laid upon the inner qualities of the mind and spirit.

Yet realising the great and noble impetus that physical culture gave to the Greek race, its essential value to public and private life, to religion and art, and nothing that when the human body did attain a pure, harmonious and healthy condition, the surroundings also became beautiful and inspiring, one cannot doubt that the image of God in man has always inspired righteousness, when it has been given the means to develop harmoniously and is animated by high moral ideals and justice. Thus we clearly see the noble mission of physical culture in the development of man and of his ideals, and its ever deeper meaning in the progress of humanity.

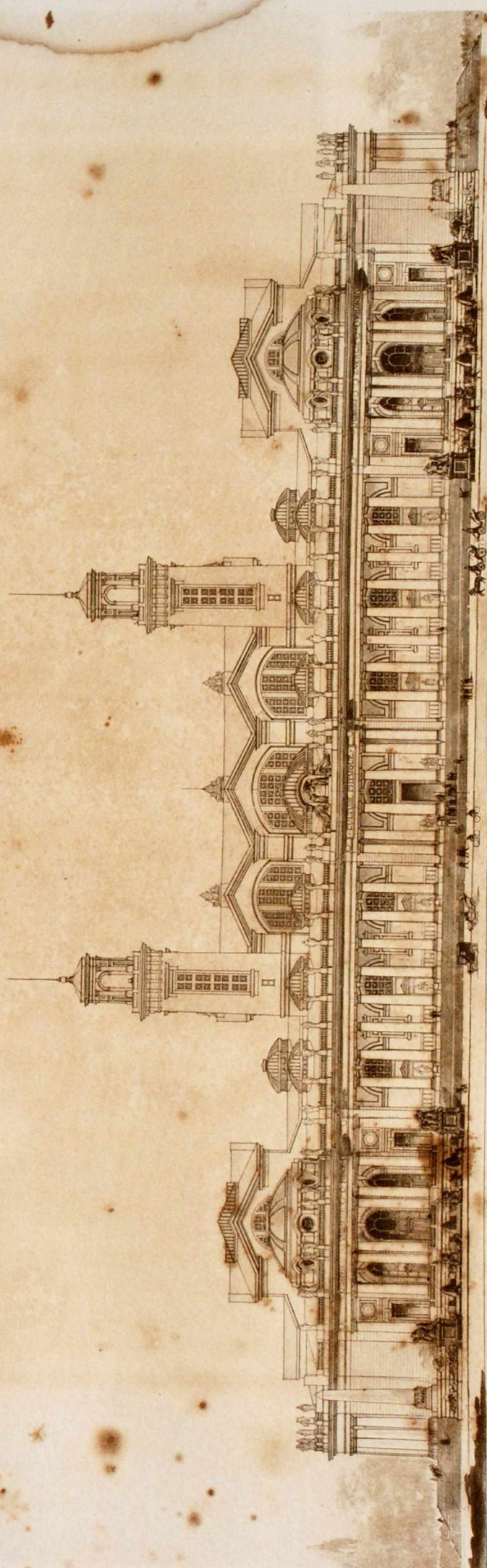
In our day, with the rapid increase of population, the immense centralisations and frequent congestion in cities and in industrial establishments, with the growing strain of mental life and the consequent physical exhaustion, it is evident, if only to offset the undue advantage given by these conditions to the spread of disease and contagion, that the need of physical culture becomes greater than ever before. It is clearly to be seen that energetic measures must be taken; not only in hygienic improvements, but, as the world progresses in the imposition of more strenuous obligations and burdens in every day life, so that men and women of all nations, may acquire more strength and endurance to meet these ever increasing demands.

Happily, the tendency of the age is to encourage all forms of physical exercise, for it is becoming generally recognised that an energetic mind cannot give full expression to its power unless sustained by a vigorous body. This in itself gives courage, self-confidence and high morals. Physical culture more and more demands world-wide recognition. Athletic accomplishments become of international importance, and undoubtedly the aim of the future will be to centralise its finest achievements.

All nations increasingly realise the essential value of all branches of science that aid the human desire to develop mentally and physically. Scientific principles become a surer guide to progress. Therefore, in consideration of the vital importance of bodily health to the men and women of all nations and with the belief that the diffusion of internationally sanctioned ideals would go far towards encouraging more harmonious and higher development, this Olympic or Physical Culture Centre was conceived upon a scientific basis.

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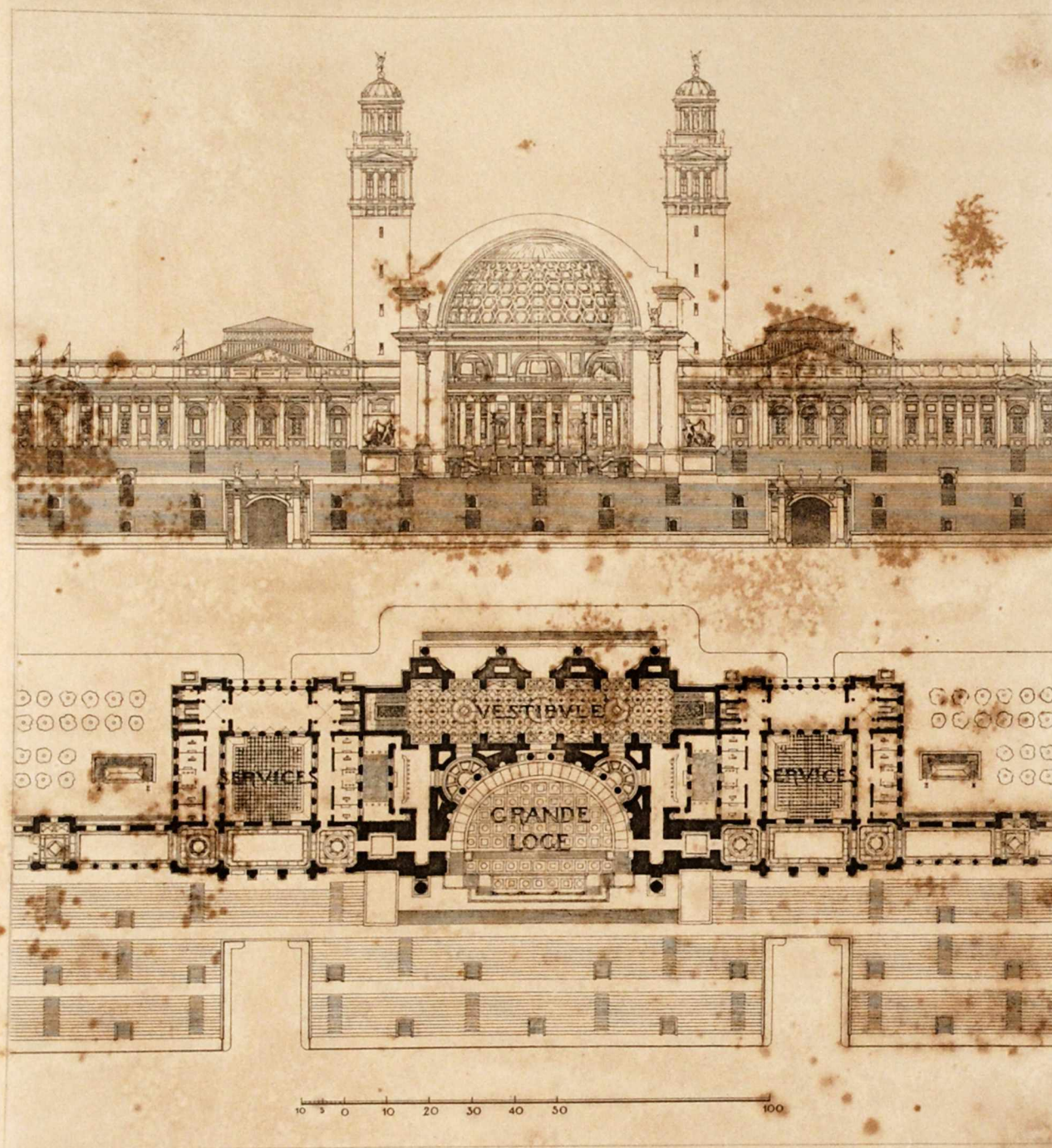


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ERNEST HENRI ARCH

UN PALAIS DE LA CULTURE PHYSIQUE

Opposite the grand entrance is a monumental Tribune of Honour in the shape of a semicircular niche 50 metres high by 40 wide. Numerous large doors



STADIUM. — ELEVATION AND GROUND PLAN OF THE TRIBUNE OF HONOUR

surrounding the building permit of rapid exit. The whole structure is capable of seating between three and four hundred thousand people. In the centre of this vast open space, athletes of all descriptions may compete with one another, display to the full the excellences of their national characteristics, introduce their national games and, in competition, show to the world the height of physical achievement, thus enabling them to compare their strength and physical development and form world-standards. The whole interior of the

Stadium is designed to serve for races, and such sports as require an immense area, but when so desired it can be divided and used according to the nature of the sport, or for presenting simultaneously games needing a lesser space. The exterior of the construction is developed evenly on all sides. A ground floor supports a first story of arcades; these uphold a plain wall and a top story of pilasters. The Grand Entrance, a three arched portico, faces from afar the Temple of Art across the T shaped lake. Stables, trainers quarters, dressing-rooms, storerooms, occupy the four corners of the great rectangular piece of ground surrounding the Stadium.

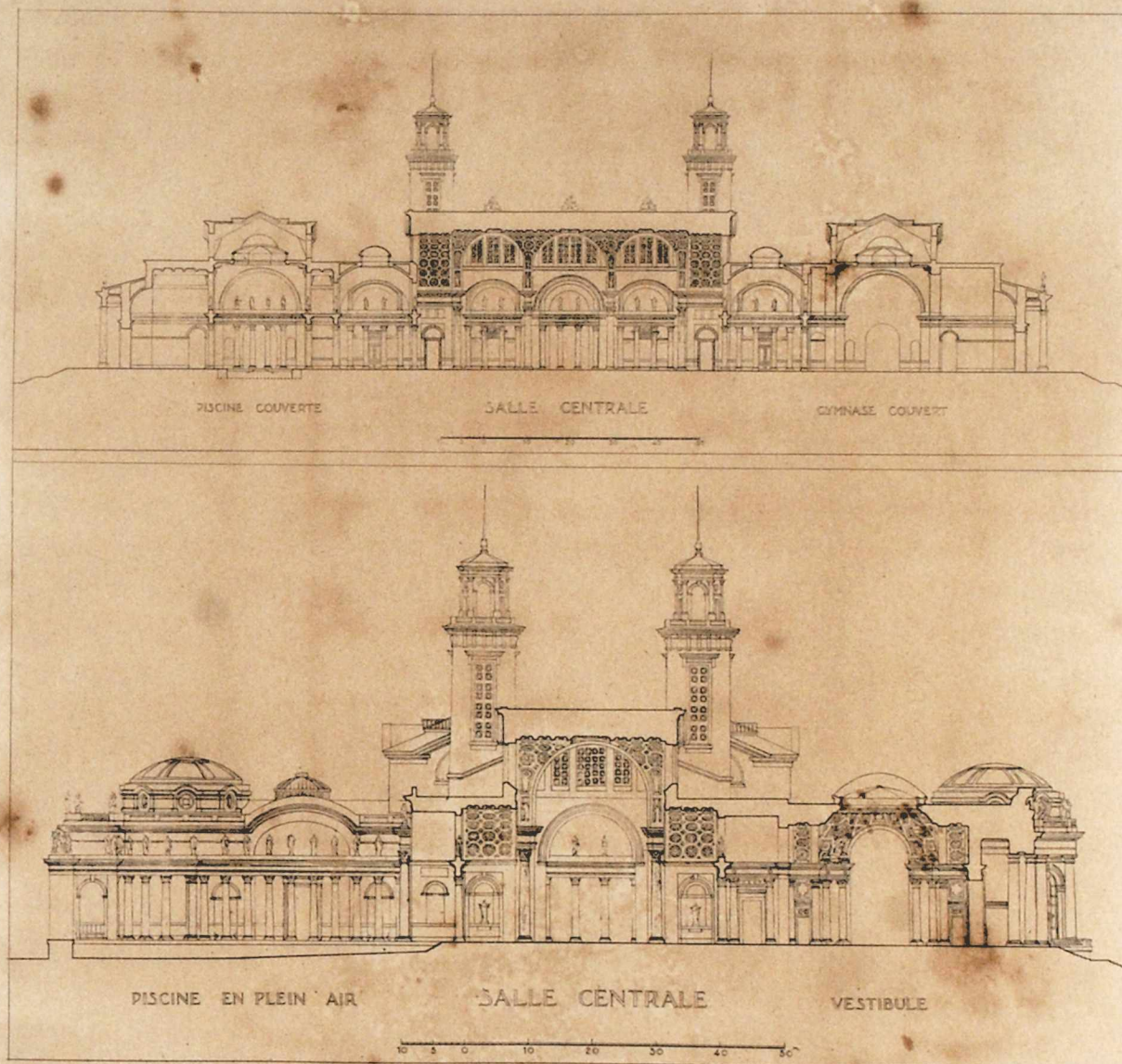
PHYSICAL CULTURE BUILDINGS

Even as buildings leading up to and aiding in the development of the highest standards were deemed essential to the neighbourhood of the Temple of Art, so it seemed impossible to conceive this Physical Culture Centre without the facilities which would lead up to and develop the standards of strength and activity, of which the highest examples should here be displayed. Therefore, closely connected and harmonising in line and proportion with the Stadium, two complete Gymnasia or Physical Culture Schools radiate, separated by wide avenues, lawns and shrubbery. The arrangement is similar to that of the artistic centre in which the schools leading to the Temple of Art are further amplified and enriched by additions of a kindred nature to complete and beautify the whole.

Inspired to some degree by the Baths of Caracalla at Rome and by others of colossal proportions, these Gymnasia, though perhaps larger than any that have so far been carried out, have been carefully considered from the point of view of bringing together all the modern requirements for a practical and scientific knowledge of human development. They contain in-door and open-air swimming-pools, gymnasia, running-tracks, reading-rooms, lunch-rooms and lounging-rooms, Lecture Halls, Medical Examination-rooms and Bath-rooms, Anatomy and Physiology Lecture Halls, Turkish Baths, a Hall of Casts from Life, briefly, all the requirements necessary for facilitating the spread of an intelligent understanding of the human body, and attaining the development necessary for individual health and general progress.

The plan of the two is almost identical. A portico forming a promenade precedes the main entrance. A monumental door leads into a round vestibule with a cupola. To right and left of this run the dressing-rooms and lockers which occupy the whole length of the portico. The extremities lead through a pavilion, to the gymnasium on one side and to a covered swimming-pool on the other. The circular vestibule in the centre leads into the great hall, which on the other side opens on to a large open-air swimming-pool. The Great Hall of gigantic proportions, is a sheltered promenade richly ornamented with the finest reproductions of ancient and modern sculp-

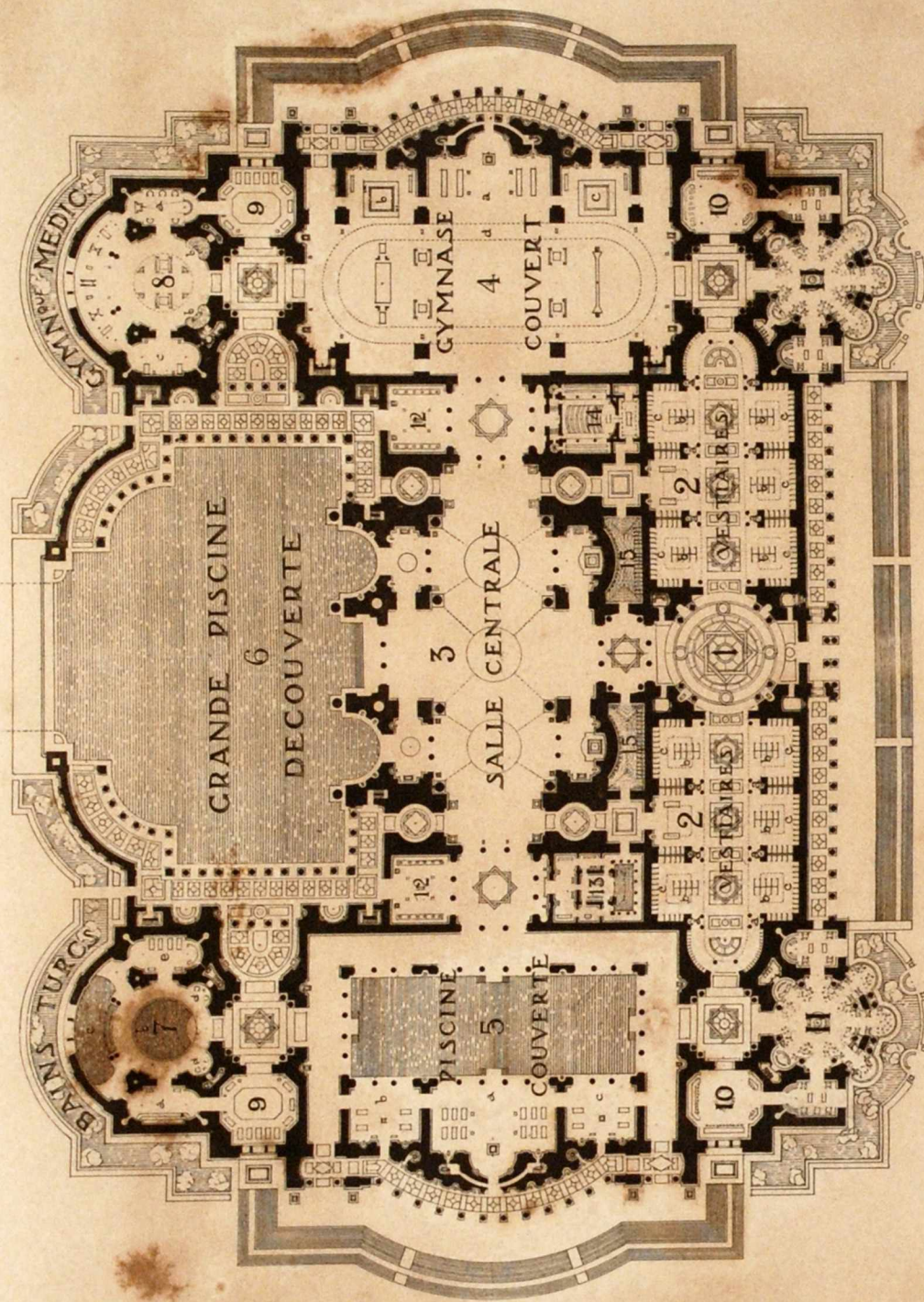
ture. Exhibitions may here be given under cover and bathers and athletes assemble after their bath and exercises. Ample space is provided for a Hall of Casts from life to be made from athletes, showing the development of the various parts of the body, when these have attained a sufficient degree of excellence to be worth preserving. This hall for keeping the records of



GYMNASIA. — LONGITUDINAL AND TRANSVERSAL SECTIONS

measurements is closely connected with the medical and hygiene department, for nothing is more valuable in the progress of physical development than records, for comparison and reference. The big Open-air Pool adjoins the great hall and occupies the same width. It is almost entirely surrounded by a peristyle. Two pylons give outside passers-by a view of this portico and of the two handsome apses of the interior façade.

Dispersed through the gardens on either side of the Gymnasia and of the great Stadium, are Out-of-door Gymnasia, Running-tracks, an Arena for



1. ENTRANCE VESTIBULE

2. DRESSING ROOMS

- a. LIFTS
- b. DOUCHES
- c. LOCKERS

3. CENTRAL HALL

4. IN-DOOR GYMNASIUM

- a. FENCING
- b. BOXING
- c. WRESTLING
- d. RUNNING-TRACK

5. IN-DOOR SWIMMING-POOL

- a. LOUNGING-ROOM
- b.-c. MASSAGE

10. READING ROOMS

11. CAFÉ'S RESTAURANT

12. MUSEUM OF CASTS

6. LARGE OPEN-AIR SWIMMING-POOL

7. TURKISH BATHS

- a. STEAM BATHS
- b. WARM POOL
- c. COLD POOL
- d. DOUCHES
- e. LOUNGING-ROOM

8. MEDICAL GYMNASIUM

- a. DOUCHES
- b. BATHS
- c. LOUNGING-ROOM

9. MASSAGE

13. MEDICAL CONSULTATION OFFICE

14. LECTURE HALL

15. DRESSING-ROOMS TOILETS

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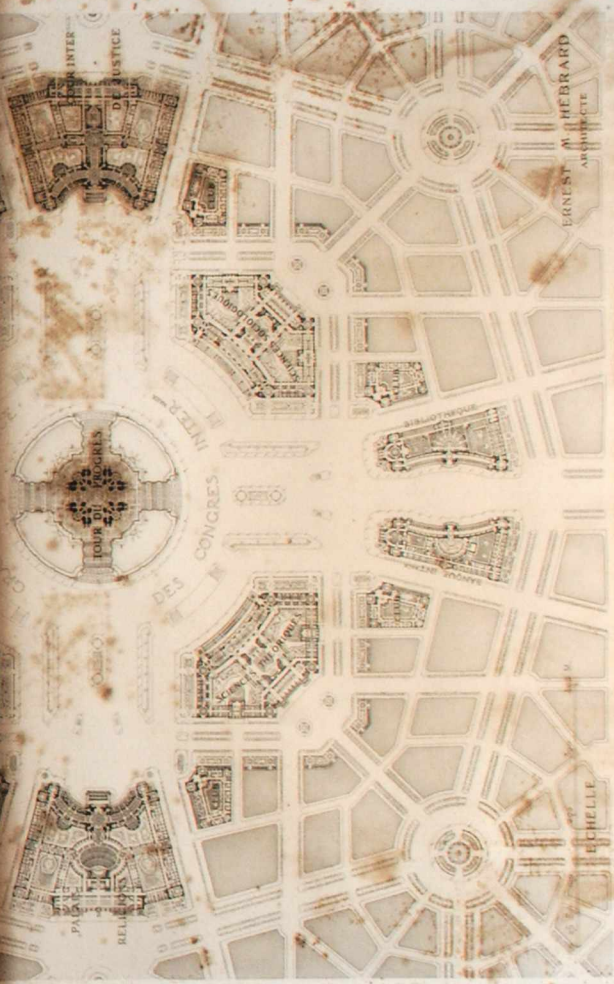
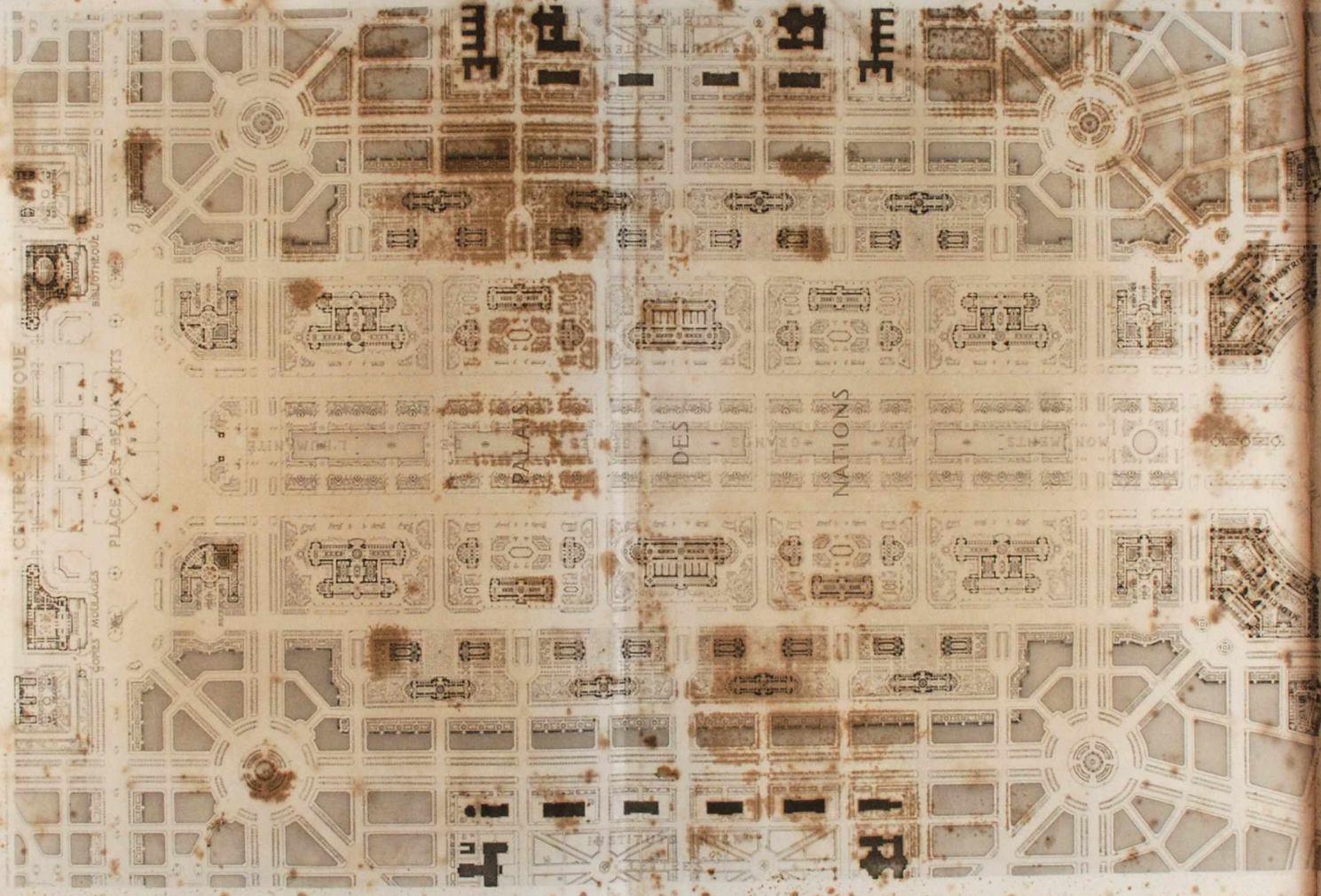
ONE OF THE PHYSICAL CULTURE BUILDINGS

wrestlers and boxers, Tennis-Clubs, Base-ball Clubs, Skating Clubs, and a division reserved entirely for children, with apparatus, Kindergarten-grounds, Play-grounds and a wide and shallow Wading-pool.

WATER STADIUM

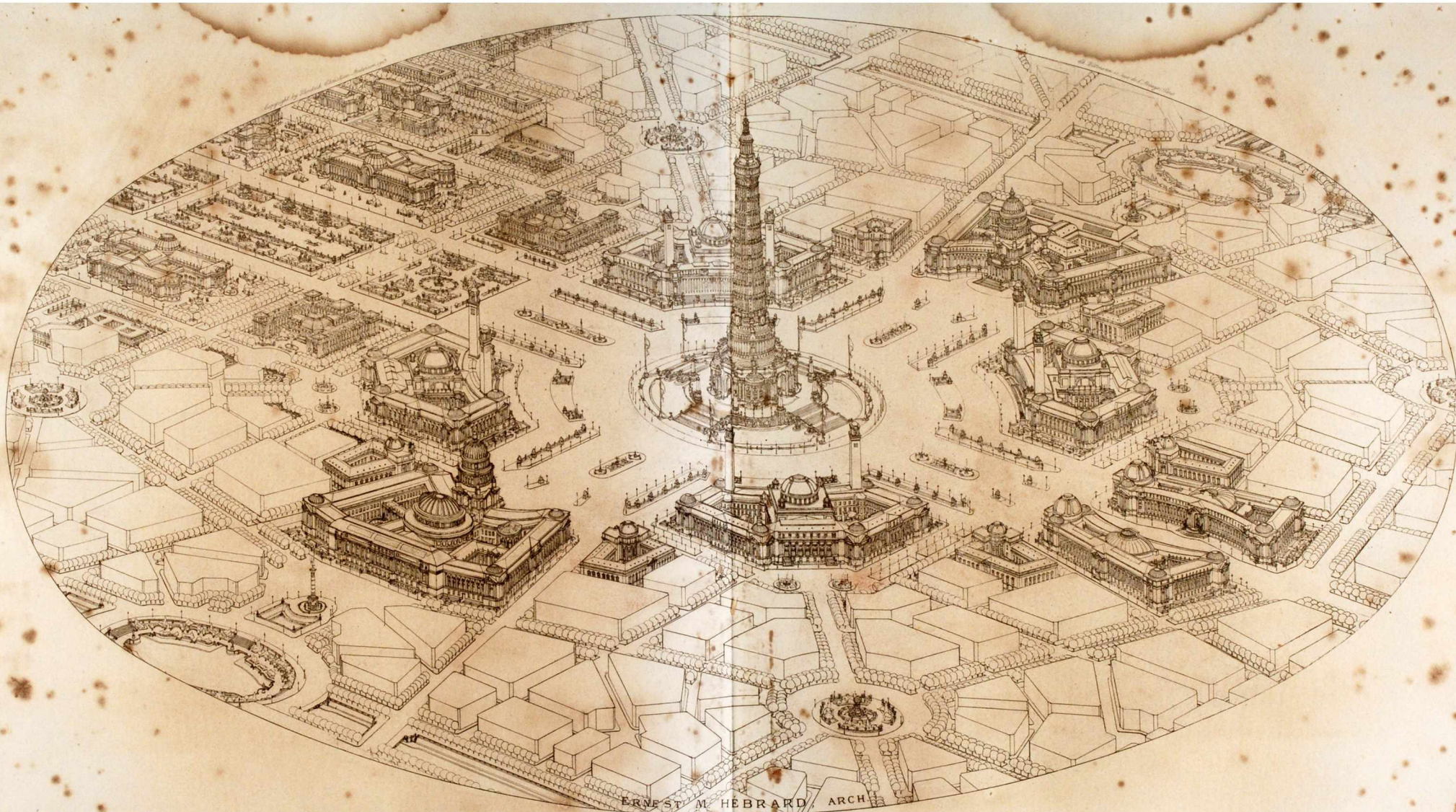
A great Water Stadium or Natatorium, completes the Physical Culture or Olympic Centre. At the two extremities of the Natatorium, and making a terminus for two main avenues that unite the Art to the Olympic Centre, triumphal arches, stand upon semicircles that project into this stadium. This great basin is suitable for aquatic and yachting purposes. Three stories of steps lead down to it from the land side. The extremities curve and the lines of the curve are continued by a break-water.

Wholly built in tiers, the straight part of the embankment forms two great popular tribunes on each side of a Tribune of Honour, from which the public and delegates from the nations can enjoy whatever spectacle may here take place. Boats can enter through three entrances. Two of these are at the extremities, and drawbridges, turning on a pivot, permit communication between the break-water and the land. The central entrance, opposite the Tribune of Honour, is ornamented by two colossal figures intended to represent manhood and womanhood in their highest physical development. These Colossi, raised upon well proportioned pedestals, rise to the height of 80 metres. With extended arms and hands clasped, they form a gateway and raise two torches high above their heads to serve as lighthouses. These figures symbolise the equality and fellowship of the sexes, who together hold out invitingly the light which shall guide the peoples of the nations through love, unity and peace to higher development.



PLAN DE LA PLACE DES CONGRES
ET DES PALAIS DES NATIONS

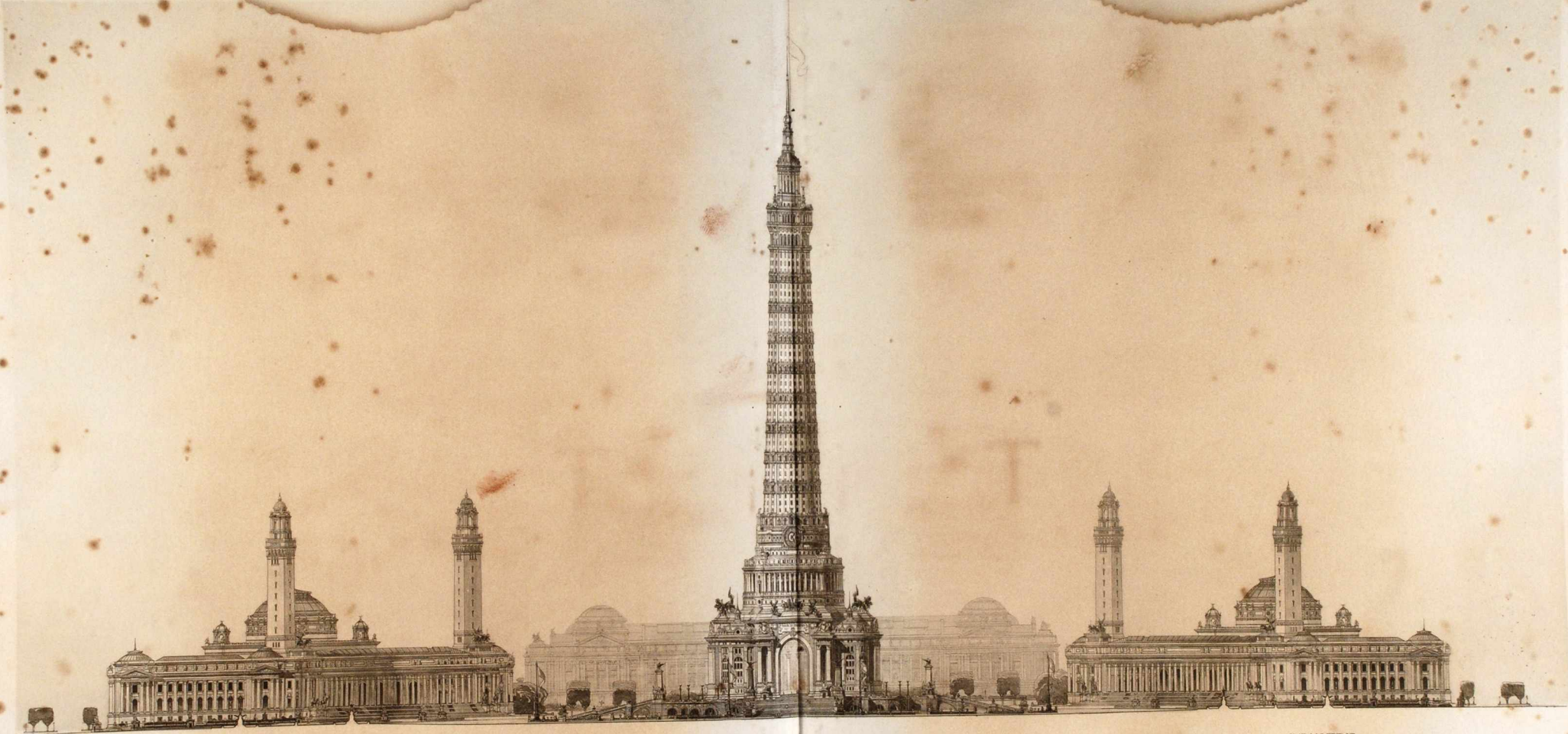
ERNEST W. HERRARD
ARCHITECTE



AN INTERNATIONAL WORLD CENTRE
VUE PERSPECTIVE DE LA PLACE DES CONGRÈS

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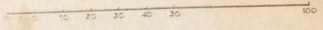
MEDECINE CHIRURGIE

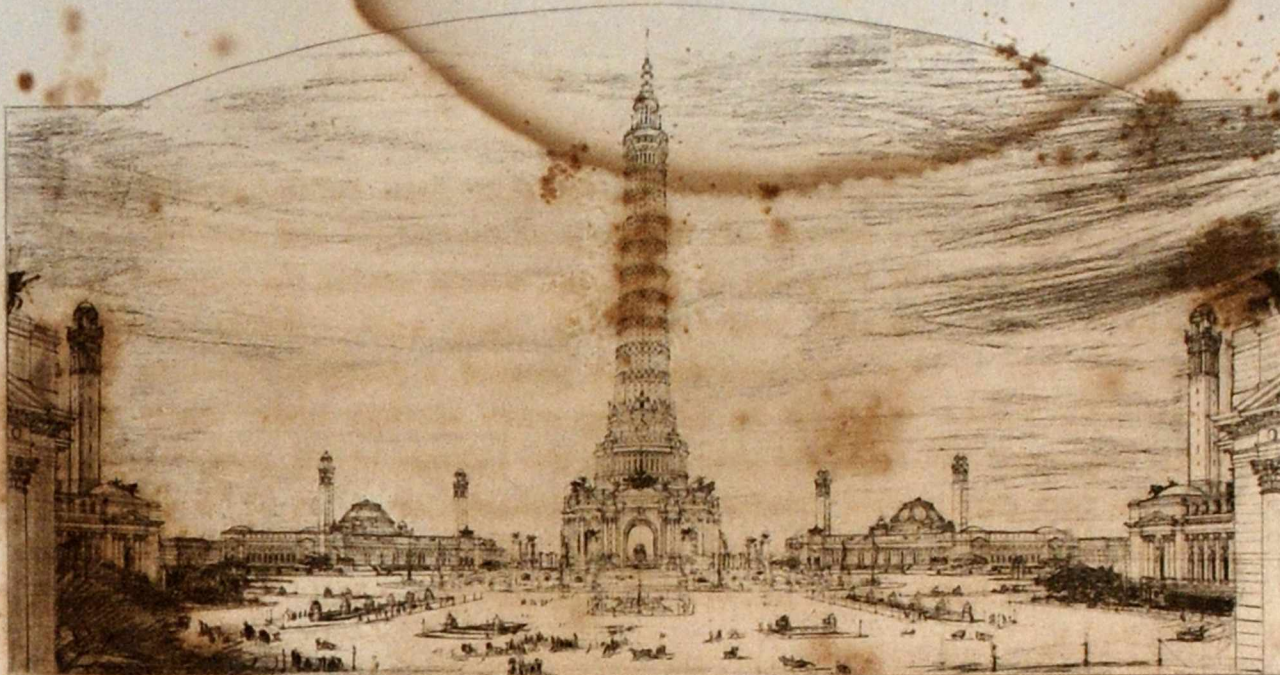
LA TOUR DU PROGRÈS

AGRICULTURE INDUSTRIE

PLACE DES CONGRÈS

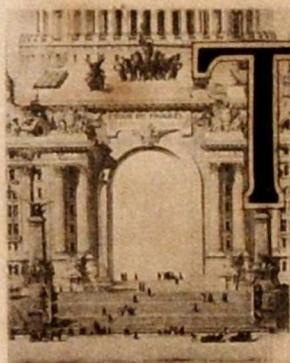
ERNEST. M. HEBRARD. ARCHITECTE





THE TOWER OF PROGRESS AND SCIENTIFIC CONGRESS BUILDINGS

THE SCIENTIFIC CENTRE



ENTRANCE TO THE TOWER
OF PROGRESS

THIS Centre, of circular shape, consists of a great Tower of Progress, four Scientific Congress Buildings, the Temple of Religions, International Court of Justice, International Reference Library and Bank or Clearing House, and of Institutes of Higher Learning that spread out on either side of the Avenue of the Nations.

A permanent centre for international congresses of science and economic research has not only been a dream in the minds of the most progressive and intelligent men of our age, but it has seemed to them to be an absolute necessity for the advancement of mankind. Besides the possibilities of unlimited economy and of the prevention of financial and intellectual waste which such a centre offers, it would quickly bring to general knowledge what the best minds of each nation are rapidly and surely creating for the benefit of humanity, and thus help towards developing those elements in human conduct which draw nations nearer together.

It is in the power of science to purify the world, to exterminate destructive germs from every nerve and fibre, to give strength and precision to all mental and physical efforts; and it is our privilege to be born in an age when all mankind, drawn more closely together, seems to be desirous

rapid progress in all human activities. We move in an atmosphere of effort and attainment. The ever increasing demand for scientific facts needs a world-centre of communication and comparison. Even the sciences of medicine and electricity, which have already done so much, are admitted to be still in their infancy, and their possibilities are as yet but imperfectly understood.

An international Congress Building for Medicine and Surgery as well as Pharmaceutics, would undoubtedly meet one of the most urgent needs of humanity. Certainly nothing is more international than disease and the search for its cure. The multiplication of humanity and the speed of transmission increase the dangers of contagion. Science reveals the causes of, and supplies the remedies for so many diseases, that through a synthesis of general experience, such knowledge would undoubtedly be gathered as would quickly lessen the ills that ravage mankind. Hygiene is the surest means of preventing and checking disease and being closely connected with all therapeutic treatment, a Central Bureau of Hygiene could hardly be more advantageously placed than in immediate connection with a world Medical and Surgical Centre. Combined action could furnish the adequate means, methods and experiments for combating not only such epidemics as cholera, plague, small-pox, etc., which, imperilling and destroying life, interrupt commerce, industry and transport trade, but would combat deep-rooted maladies like tuberculosis, cancer, etc., the fight against which so greatly needs vigorous and concerted measures. Moreover, by cooperation with the necessary legal authorities, likewise centralised, means would soon be found and enforced for the extermination of the many fraudulent patent medicines, which are another source of danger to the health and energies of man. International support of such an institution as is here suggested for the convenience of all workers in the great cause of human health, would soon go far in reducing the amount of physical and consequent mental suffering in the world.

Agriculture, commerce and industry depend more and more for their progress upon science. In a world-centre, the best methods might be studied not only for increasing the fertility of the soil, but also for establishing the most rapid and economical system of distribution of its products. In this way those regions of the earth, now lying out of reach of the more thickly populated centres, might be brought into direct communication by land or sea. Plans of railroads could be studied for connecting various fertile districts which have not yet been brought within the radius of industrial activity, and where the inhabitants through want of encouragement, still lack all initiative. It is true that an International Institute of Agriculture, which owes much to the munificence of the King of Italy, has already been established in Rome. But the representation of this institution as of the other important national and international organisations that already do so much towards harmonising the relations and the knowledge of the world, in a centre common

of advancing on the highest and most beneficial lines for the general good.

A common centre uniting all branches of theoretical and applied science could but promote the progress of each, and would enable the learned of all nations to come together and harmonise their work. While leaving all congresses free to meet wheresoever they pleased, a permanent centre would enormously reduce expenses by bringing many services under one international management; it would also collect the records of all congresses, and thus not only preserve the results of many valuable researches which, without general organisation, run the risk of going astray when once a congress is over, but make them easily accessible by means of suitable classification and arrangement.

Moreover, a Scientific Congress Centre in immediate connection with others, would at every congress offer congressionists the advantage not only of meeting their fellow-workers in their own paths, but those who labour in other fields of human interest. At the same time they would have the opportunity of seeing the world's latest productions in art, music, drama and athletics, as well as in science, invention and learning.

Humanity multiplies, develops, circulates and progresses so rapidly that the demand upon science becomes increasingly imperative, not only for the formulation of abstract ideals, but for the furtherance of cooperative effort in all the varied and absorbing pursuits that occupy mankind. The heavy pressure of modern life requires to be lightened as far as possible; and is it not reasonable to believe that the means of simplifying and upraising life would be enormously increased by some great world-centre that would draw to itself and assimilate the highest scientific achievements, and distribute them with great saving of time and energy?

A great fountain of human knowledge such as is here outlined would offer its ever flowing, varied streams of science to all mankind and spread them freely and rapidly throughout the inhabited world, and this would surely help forward that progress which the generations yet unborn will justly expect as their inheritance from us, and which they will certainly in their turn continue.

There is something very exhilarating in the thought, if we only pause to realise it, that science in the near future will provide for all man's essential requirements. One may say that it is as impossible to fix any limit to the power and usefulness of inventive genius as it is to gauge the depths of the firmament. The tidal and solar energies, when once turned to account by science, will place at our disposal a power which is practically inexhaustible. Nor is this all. Slowly the natural forces, controlled by science, are becoming man's servants, and proving themselves mighty agents for good. There is no mystery in all this. Evidently it was intended from the beginning, and we were created to discover and yoke to our service the unseen processes of nature.

Knowledge and its exchange are needed, as well as its rapid diffusion. It is an undeniable fact that the present age is one which demands

It is becoming more and more evident that isolated national governments are unable to secure for their citizens all the advantages of civilisation. Through the indispensable interchange in the relations of civilised life, each individual state is practically forced to avail itself of the advantages offered by international organisations. In scientific and administrative processes the common experience of the entire world is enlisted in order to obtain the most satisfactory results. But it is especially in the field of criminology and sanitary administration that a large measure of international cooperation is necessary, for the protection of the population and the property of the different countries.

The terrible menace from which all nations continually suffer through their criminal and degenerate classes — a menace which passes from nation to nation and spreads from generation to generation — imperatively demands international organisation. The close connection between crime and mental and physical degeneracy in itself suggests how great the reciprocal advantages would be, if a world-centre for Law and Criminology appointed to study the causes and determine the treatment of crime and degeneracy, were placed in immediate connection with a similar centre for Medicine, Surgery and Hygiene. Through their cooperation, the proper methods for safeguarding the innocent and, at the same time, for humanely treating, and, if possible, reforming the offenders could be agreed upon, and so strongly recommended as to be enforced by the proper authorities.

We need only to think of the criminals who endeavour through violence to uproot the foundations of all ordered society to understand how important international cooperation will be for the future efficiency of the protective service. Modern criminal jurisprudence regards punishment as among its lesser tasks; it concentrates its efforts upon the means of preventing crime. Hence extradition by no means exhausts all the forms of mutual assistance. Crime is organised internationally : the prevention of crime must therefore be similarly organised.

At the present moment it is a curious contradiction in civilised society that a criminal may often escape punishment, even at times for the most grievous crimes, by leaving the country in which his misdeed was committed, and by going to another. There he may follow his avocation. A medical man, on the other hand, who for a life-time aims at relieving suffering and at lessening the destruction of the human family, is restrained by strict laws from exercising his profession or from studying special diseases in any land but the one in which he has received his diploma.

Yet the medical science is *one* all over the world, and one is the human system to the study of which it is destined. The greatest problems concerning humanity, from the medical standpoint, occupy the mind of the men of this profession only in *one* way from pole to pole. Surely, therefore, if the law of nature which controls the human family is one all over the earth, the

to all, could hardly fail to enlarge still more their sphere of usefulness among the nations.

The strides made of late by electrical and other applied sciences are enormous, and it is difficult to foresee any limits to the possibilities opening before us. A marvellous impetus has been given to social and commercial life, and this in turn has led to an immense development of technical apparatus and appliances. The guiding hand of scientific invention places all humanity upon a surer moral and economic basis. These inventions meet mental and physical requirements with such rapidity and directness that they seem to become the guardian angels of human necessities, providing for progress and prosperity even in advance of the demand, — as though the silent artificer in human endeavours worked by an unseen light, supplying every need with unerring hand. It is certain that the applied sciences are of the utmost importance for mental and physical progress. Yet, the greatest scientists of our age assure us that our control of Nature's energies is only beginning, that electricity is one of the primal forms of force, which as yet is neither fully mastered nor understood, that the future holds numberless hidden possibilities, which through scientific study and cooperation will be disclosed, and that it is impossible to assign any limit to the inventions and discoveries that posterity will enjoy. Since all nations, to a greater or lesser degree contribute inventions of undeniable utility, and since these are freely used for the benefit of all men, a world-centre for the promotion of applied science, and for the protection of invention would undoubtedly be of immense value in supplying demands from all over the world.

In view of the multitude of new arrangements created by the constant increase in means of communication and transportation, the need of unifying and harmonising the relations between nation and nation becomes more and more apparent, and, of necessity, new laws are demanded for new conditions. Regarding points of international contact old laws greatly require to be remodelled, and in many cases new ones to be made; and for this purpose nothing could be more suitable than a permanent world-centre for Law and Criminology, in immediate communication with all the other institutes of centralised endeavour.

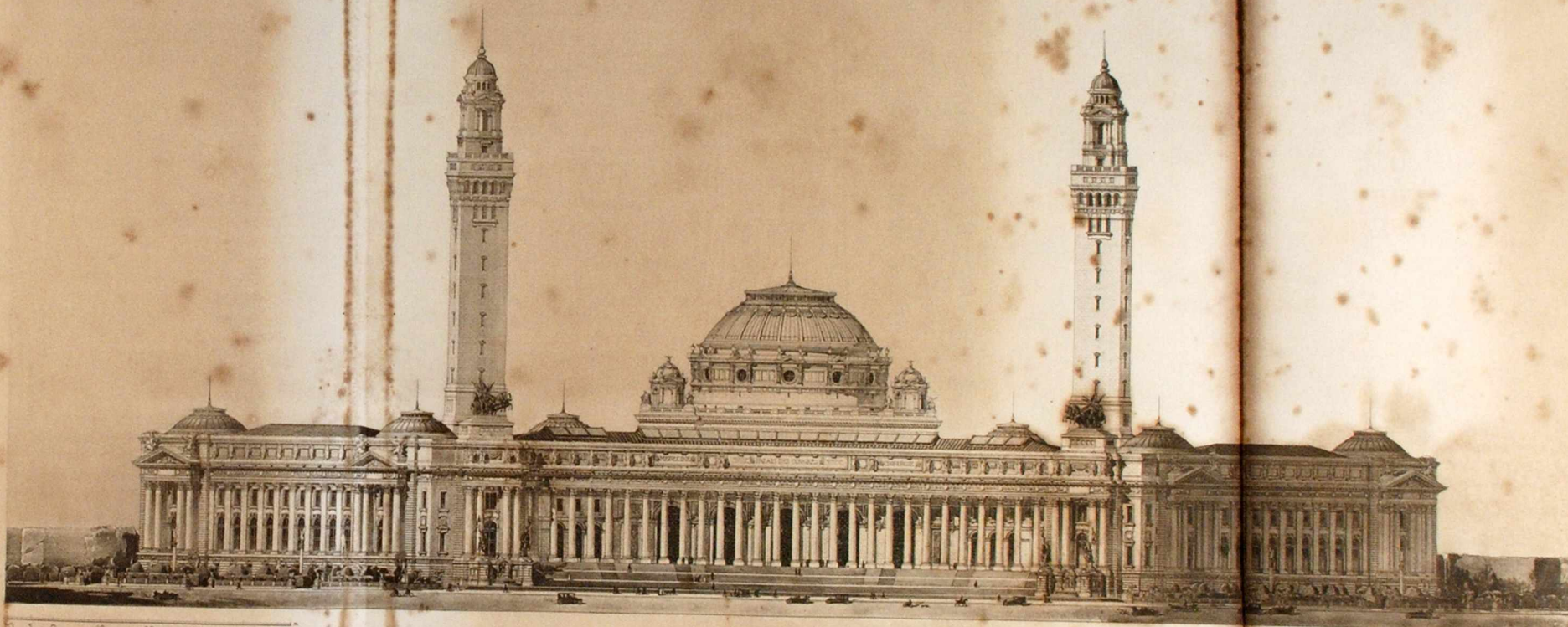
It is now becoming clearly understood that international legislation for the benefit of commerce, industry, labour, hygiene, etc., is made really obligatory by reason of the expansion of human endeavour, and the ever increasing community of interests. This must be based upon accurate knowledge of all the conditions involved, as well as upon the human need of healthy mental and physical expansion. The beginning of an international jurisdiction has already been established, and the whole range of industrial institutions, as well as all classes of people are eagerly looking forward to the righteous development of a humane, protective, international code of laws.

law of the world which controls the medical fraternity dedicated only to the study of this law of nature, should also be *one*.

A World Centre of Communication, in touch with the acknowledged institutes of every country, could easily ascertain the validity of every diploma presented to it for inspection. After receiving, from the proper sources, the generalities of each applicant, it could give a duly sanctioned certificate. The title that enables a medical man to carry out his mission, and that is a guarantee of safety to the human family, once recognised by one nation, would thus be acknowledged by all. His diploma, if acquired in the proper way, would then be a free passport for his work in *one country*, which is, the world. Likewise, refusal, after due investigation, to grant a certificate, would be an international guarantee against illegitimate practises.

We might thus review all the interests, both intellectual and material of civilised humanity, and we should doubtless find in each of them something that calls for international action and organisation. It is only when full advantage is taken of the possibilities of such cooperation that human activities will be able fully to unfold and grow to their proper importance. If the experts in all branches of science could meet in a permanent centre, their contributions, through comparison and coordination, would lay a foundation of ascertained facts upon which, without a shadow of doubt, the whole of humanity would rise to a state of physical and mental perfection never hitherto conceived as possible. Indeed, the divine architecture of the whole world would gradually be revealed, and a Temple of Knowledge built, crowned by the everlasting dome of Truth, under which the generations would in undying succession be taught by the present and the past to look forward with full assurance to the future.

It is needless further to point out the immense benefit that such a centre might be. It is obvious that the saving of time and money would be practically unlimited. The waste of human endeavour, the sacrifice of human life would be things of the past. Individuals, no less than states, would obtain their rights more easily through the strengthening of the bonds of fellowship and love, — the one essential requirement in developing peace and good will, and in harmonising the many ways of bettering social conditions, that depend as much upon scientific and intellectual as upon artistic and physical culture. The scientific forces of the world, if brought together without selfish motive into a harmonious centre, would be — beyond all doubt — of immense benefit to the present, and would leave to succeeding generations valuable records of their forefathers' love and faith, and of their effort, in spite of all temporarily hindering circumstances, to raise humanity to a higher level of existence, both physically and mentally. And peace — lasting peace — will follow unity of endeavour as surely as day follows night.



UN PALAIS DES CONGRES

ERNEST. M. HEBRARD ARCH.

1. ENTRANCE VESTIBULE, LOBBY

2. LARGE CONGRESS HALL

HOLDING 3,000 PEOPLE

ANNEXES WITH SIDE ENTRANCES BELOW

3. SECONDARY HALLS

EACH HOLDING 800 PEOPLE

ANNEXES

4. LIBRARY READING-ROOM

LIBRARIAN'S OFFICE

CATALOGUE AND STORE-ROOMS BELOW

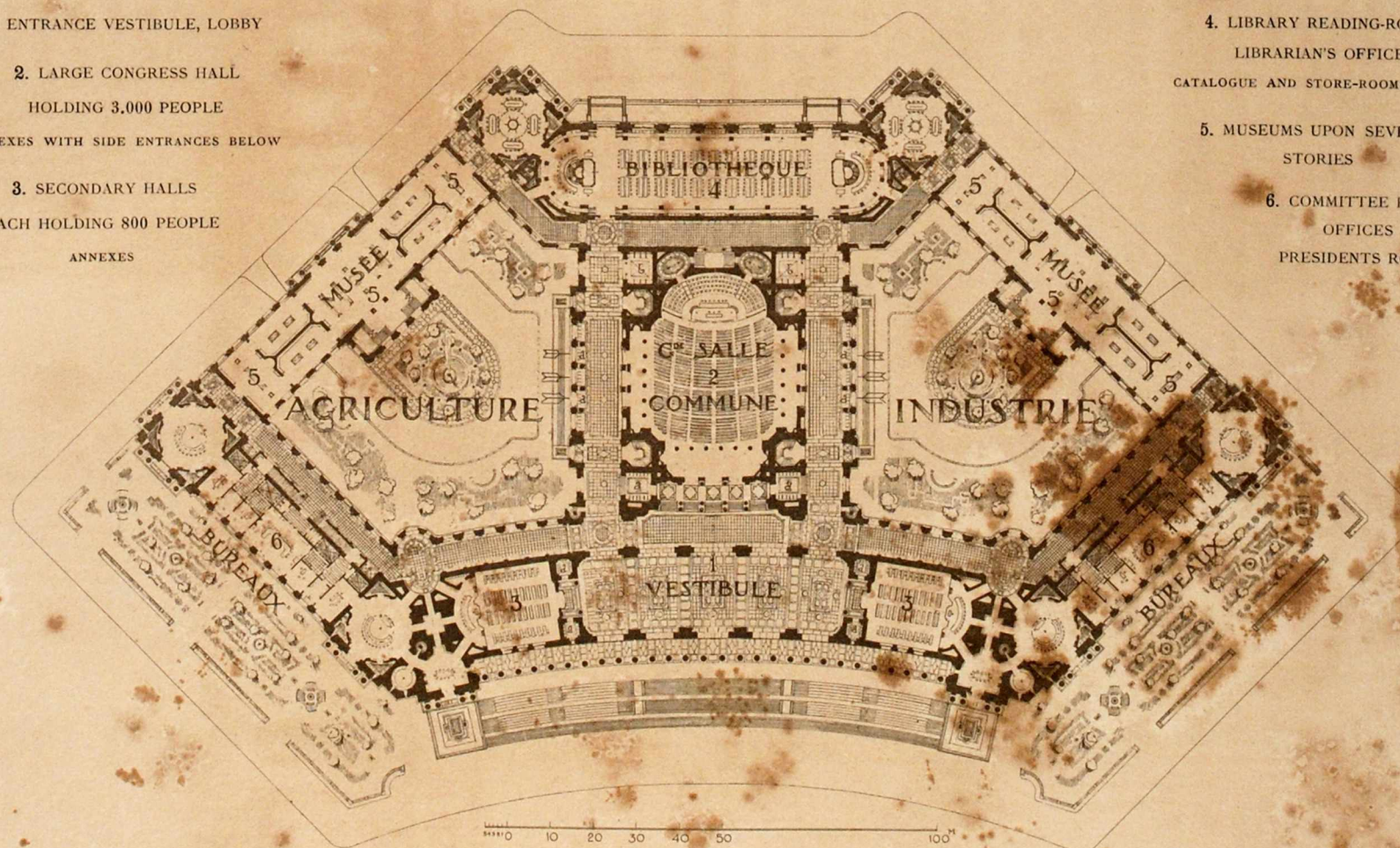
5. MUSEUMS UPON SEVERAL

STORIES

6. COMMITTEE ROOMS

OFFICES

PRESIDENTS ROOMS



PLAN OF ONE OF THE CONGRESS BUILDINGS

and for the delegates of the various nations; in addition there will be record and archive offices, museums and exhibition rooms in which to exhibit scientific collections and all the objects required for illustrating the subjects discussed in the several congresses; while in the Institute for Surgery and Medicine are rooms for patients who may serve for demonstration purposes in particular or rare maladies. Great care has been taken in lighting and in harmoniously connecting the several parts of each of these buildings in order to make them fully capable of serving the practical purposes for which they were designed. It is needless to add that spacious restaurants and conversation rooms have not been forgotten.

INSTITUTES OF HIGHER LEARNING

International Institutes of Higher Learning, though often suggested, have not yet been actually built. Nevertheless, there is every reason to believe that their sphere of usefulness would be very large.

Every effort has been made in the present work to plan such Institutes as would suit the requirements of the foremost authorities in all branches of learning; that they might meet under the most favourable conditions, and that professors and teachers, as well as men and women of culture from all parts of the world desiring to prolong or renew their studies under the guidance of the most advanced minds of the time, might here assemble.

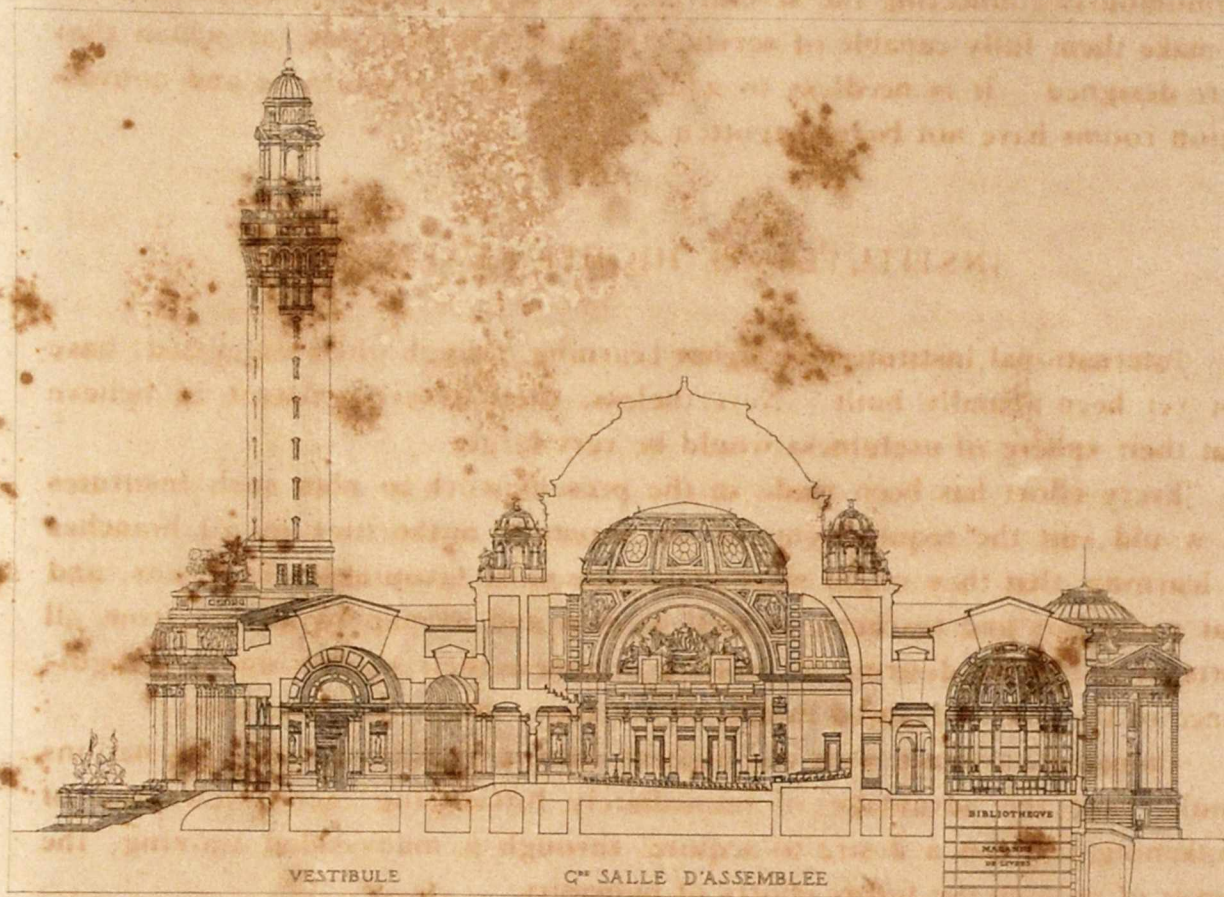
Immediate contact with the highest culture and learning of all nations would have the advantage of immediately broadening men's views and of awakening in them a desire to acquire, through a many-sided training, the power of guiding the future efforts of humanity.

It would take a long time to detail all the many arguments in favour of founding these International Institutes for Higher Education in all branches of Theoretical and Applied Science, Religion, Law and Letters. But the principal reasons may be enumerated as follows: (1) to promote a closer understanding between nation and nation; (2) to bring all practical and scientific knowledge into a common centre where it could be tested, and prepared for general diffusion; (3) to give an opportunity to professors and teachers to meet their colleagues from all parts of the world; (4) to form a direct line of communication for the spread of knowledge and scientific achievements among all colleges and universities; (5) to bring the ideal and the practical together in a world harmony of purpose and accomplishment; (6) and lastly, to spread truth and human aspirations freely and rapidly among all peoples.

Further advantages would be: the practical suggestions which world scientific congresses could furnish upon all pressing subjects; the ready means of recording all progress made or suggested; and the proximity to the world

DESCRIPTION OF THE SCIENTIFIC CONGRESS BUILDINGS

These four buildings, of hexagonal shape, form a connected whole. They stand in the four corners of the great International Congress Square, with their imposing front colonnades turned towards the Tower of Progress. Each



SECTION OF ONE OF THE CONGRESS BUILDINGS

is crowned by a dome, and ornamented by a slender tower at either end of the semicircular façade. Owing to the fact that the requirements of all international scientific congresses are necessarily similar, the ground-plans of the four buildings bear a close resemblance to one another. The main entrance facing the Tower leads at once into a vestibule of considerable proportions. To right and left are large, well lighted conference and lecture halls. In the centre of each building, between two inner courts accessible to carriages, is a great International Conference Hall with tribune and tiers of seats capable of holding some 3000 people. These halls, of imposing proportions, crowned by well lighted domes, have been carefully planned as regards acoustics and easy communication. Wide corridors surround the four sides and lead directly from the main vestibule to a very large library and reading-rooms, which occupy the whole rear façade. To right and left, and surrounding spacious courts, are ample and commodious offices for the permanent Executive Committee,

God's people. Our highest aim is the search for truths; our greatest privilege to make Truth the common possession of the world, the common foundation of human hope. When a new impetus is given to the great intellectual movement of the last century tending towards the unification of knowledge and scientific effort, the future will be provided with an assurance of purpose and a desire to carry on the work begun with still greater strength and enlightenment. It will then realise that the aim of to-day has been so to gather up and coordinate the best efforts of the present and the past that they might lead onward in unbroken continuity to its own endeavours and ideals.

These Institutes of Higher Learning could also offer the attractions of the Art Centre to all lovers of the Muses. It would be within close range of the Stadium and Gymnasia, of the Tower of Progress with its manifold interests, of the Reference Library, of the Court of Justice and of the Temple of Religions, and at the same time removed from all noise and disturbance. All this cannot but appeal to the aesthetic, the practical and ideal in man.

Such Institutes built upon the highest pinnacle of human endeavour would disclose an horizon of golden achievements, whose irradiance would illumine the ends of the world. If we can establish a centre where humanity may unite in bringing its highest culture and noblest achievements, there must the Fountain of Knowledge be found, fed and inspired by the Spirit of God.

DESCRIPTION OF THE INSTITUTES OF HIGHER LEARNING

As will be seen upon the bird's eye view of the General Plan, these Institutes are situated on either side of the Avenue of the Nations, and are easily reached from all three centres as well as from the City, by underground tubes and by broad avenues. As the requirements of the several sciences are so varied, no attempt has been made as yet to work out the various buildings in any detail. The whole was considered broadly as answering the requirements of theoretical and applied science, law, religion and letters, forming as it were, two great wings belonging to the Scientific Centre. An ideal site is suggested. Two great rectangles are laid out, and divided into spaces for the buildings which are to be surrounded by gardens, fountains and walks; while great care has been taken to amply provide for all necessary constructions.

TEMPLE OF RELIGIONS

A world centre for the study of religions, with the special object of seeking out the underlying truths common to all, and of emphasising the

Press. The results of international congresses would be immediately registered, and the documents preserved in the archives.

There is every reason to believe that such Institutes, once established by international agreement, would greatly stimulate all intellectual, economic and scientific studies which will in the future be ever more needed to strengthen and broaden the philosophic, religious and political activities of men.

Study in proximity to the other centres would promote the acquisition of knowledge from the very germ of its creation. Scholars and students could come face to face with their colleagues in all branches of knowledge. Our age longs for a new synthesis, and no longer turns to science merely for the purpose of obtaining greater material comfort, and more economical means of living. For science, like a strongly beating heart gives renewed life to man; and he is waiting for her to give that knowledge which is essential to the fulfilment of his great mission — the knowledge of how to gather into a single unity all his scattered experiences, so that he may hasten the world's harmonious progress.

Just as the present is guided by the strongest energies of the past and by the sacrifices made by it, so the future must be lent a willing, strong, unwavering hand to assure its progress upon the broadest and most open roads. It is evident that our age cannot wholly rest upon the achievements of the past. However much these may appeal to the aesthetic, philosophical or practical minds that with profound reverence and gratitude appreciate their meaning and worth, new truths must lead the way.

Our universities and colleges amply supply us with the most exact information concerning the art, science, philosophy and life of the past. There have been and always will be centres for this kind of knowledge, supplying a distinct need, and offering great advantages to students and men of learning. Yet we cannot live and advance by this alone. New life brings new demands; and for these we must prepare ourselves. We cannot always point backwards, even though we indicate ideals. We cannot bring the dead to life again. We must create new ideals, and look forward and upward, assured that the fundamental aim set before men is search after truth. There is something very uplifting in this assurance, and in the thought that all the greatest philosophers and men of science cheerfully expend their whole life and strength in endeavouring to leave the world a fragment — however small — of this truth, which is gradually leading us to the very divinity of our Creator.

All common effort made towards intellectual culture tends to raise mankind as a complete whole, bringing together the rich and the poor, the weak and the strong in the arms of divine progress. It gives unity of purpose to human endeavour, purifies the mind, animates the soul, and diffuses harmony throughout the world. Nothing that is righteous will be created by man in vain, and nothing that is divine will be kept from

THE SCIENTIFIC CENTRE.

attitude and the intelligence of the people who with prayers and sacrifices did worship to the spirit they had endeavoured to symbolise.

The early ages were wrapped in mysterious shrouds of symbolism that only gradually were cast off, and the soul of man walked in the shadow of doubt. Yet we can see the beginning of freedom of thought and of action asserting itself as the world advanced and man grew to realise his existence with greater clearness.

Sacred temples were built. Men looked up at the blue, mysterious, jewelled sky, and imagined other realms divinely conceived. They felt that their God in reality must dwell above the firmament, in light and glory. Even in dreams their desire to reach upwards is manifest. Thus we read in Genesis : " And behold, a ladder set up on the earth, and the top of it reached to heaven : and, behold, the angels of God ascending and descending on it. "

As the human mind developed and through devotion and prayer drew nearer to the invisible divinity believed to inhabit the immeasurable heights, divisions and subdivisions arose among men and nations because of differences of opinion concerning his nature. It was thought that spiritual and material development could not go together ; in fact that the latter could only be obtained through despotism and slavery.

In glancing over the early despotisms, though many religious conceptions are expressed in sculptures so worn and obliterated as to be almost incomprehensible, we distinctly feel the struggle of the human soul reaching upward from its material self ; and even though in the earlier Assyrian and Egyptian ages, idolatry produced but few noteworthy works of art, it inspired later, as we know, some of the world's masterpieces in architecture and sculpture.

The Pharaohs were regarded as divine incarnations, the arbiters and disposers of human activity, the creators and builders of their people, who through fear, helplessness and abject thralldom, were forced to accept such views of divinity as were imposed upon them. Yet their religious system was undoubtedly the motive that gave life to art, inspired a sense of morality, modified political ambitions and caused some idea of equity and law, — even when the rulers who claimed divine rights inflicted every form of cruelty upon their subjects.

The exodus of the Hebrews from the bondage of Egypt, inspired by the powerful insight of Moses, marked a determined endeavour to harmonise, through strict laws of conduct, almost every act of daily life with the purity of spiritual vision. The Jewish sacred writings that have been the guide of millions of people, bear eloquent testimony to the strength of the search after righteousness. The building of Jerusalem and the great inspiration that created the Temple of Solomon, are among the first records of a whole nation willingly united for one religious cause, and striving to form a centralisation full of spiritual significance and rich in human aspirations.

The Hebrews' desire for righteousness and purity through love, devo-

essential unity of their missions throughout the world, would go far towards the attainment of a higher and clearer conception of the Creator of the world and of man.

Every religion contains a spark of divine light which illumines the kingdom of heaven within the soul of man, and which no human hand can quench. Should not all forms of this celestial fire from all times and places be gathered together? Do they not burn as freely and shine as clearly to-day as they did in the past? If united and blent into a clear and harmonious whole, would they not be the most potent means of enlightening and uplifting the soul of man and of revealing his Creator?

The essence of religion is the knowledge of God, which is eternal life; and to bring together the world's religious systems can but create a stronger faith. We read in the New Testament (Heb. I, 1.) "God at sundry times and in divers manners spake in time past unto the fathers by the prophets." Similarly Vishnu, the second person of the Hindu Trinity, when incarnate as Krishna, declares: "Mankind comes to me along many roads, and on every road that man approaches me, on that road do I welcome him; for all roads are mine." The simple grand truth of these words is unmistakable, and now people are beginning to realise that prophets belong to no one nation, but to all, and that scriptures belong to all religions and not to one alone.

In spite of the many varied forms and symbols which have always marked the different theologies of the world, the fact remains undeniable to the reasonable and scientific mind, that from the earliest times, humanity has believed in one all-embracing Eternal Power, to whom it has turned in love, worship and prayer. The divine spirit created the world, and his immortal conceptions will always fill the soul of man with a desire to draw himself nearer to his Maker.

In the dawn of the world's history, we find man marvelling at the irresistible forces of nature and worshipping them as symbols of divinity; and man will always so marvel. From the beginning his desire has been to search for an invisible God, and when nothing else of sufficient grandeur revealed itself to his intelligence, we find him bowing low in reverence, worship and fear to the sun, the moon, the stars, water and fire. All active, moving elements became instinct with mysterious divinity. He had no doubt of their superhuman power and might. They fed his mind with vital realities, thus it was natural that he should sing their praise and bend his knee in worship.

At all times man has naturally grasped at some material ideal for protection and spiritual comfort. Symbolic images in stone, wood and clay, often grotesque and without aesthetic beauty have come down to us from prehistoric ages. Many of these, of terrible aspect, roughly carved and crudely painted were meant to inspire fear; yet we can feel the confused concentration of thought that gave rise to such forms, and understand the mental

the divinity of nature's loveliness reflected in his own soul. The Homeric mythology naturally left a lasting impress upon the minds and methods of the succeeding age. Zeus, the father of gods and men, and all the other immortals dwelling beyond the clouds, became unquestioned realities. The vivid Greek imagination inevitably regarded all natural phenomena — the crash of thunder, the flaming bolt, the earthquake, the storm winds, etc., — as the work of anthropomorphic beings, whose anger might be appeased, and whose help could be sought by sacrifice and prayer. The visible and the invisible worlds met together. The heavens became a Kingdom ruled by a dynasty more than mortal, yet clad in mortal form, thus raising human nature to the likeness of itself. The old poets had portrayed these mighty gods with such beauty and vivid realism that all men were awe-struck and worshipped them with fear and reverence. And the sculptor took up his chisel, and forth from snow white marble he drew the perfect images of these gods that ruled the destinies of man and of the world. Seeing God through man, he used man's form as model, and fashioned his gods in glorified human shape.

The Greeks felt the image of God in man. Their conception of the divine was far more simple than the confused ideas of the Assyrians or of the Egyptians, who often felt the necessity of completing their representation of divinity by adding the head of a beast or bird to the human figure. The cat, the monkey, the crocodile, as well as the sun, moon, stars and rivers in turn symbolised to the Egyptians the deity's presence. For them the human body served as a useful machine and for the conventional expression of symbols. For the Greeks it served a higher cause : it was in itself the symbol of divinity, and the tribute paid to it in art was the natural outcome of a truer intuition.

Thus, in Greece we find that philosophy, poetry, architecture and sculpture derived their loftiest inspirations, their noblest development from religion. When art is informed with spiritual motives it becomes both lovable and lovely. The Greeks found the highest expression of divinity in the idealised forms of man and woman. Their symbolism of gods and goddesses was drawn from the most perfect development of the human body, which they transfigured with surpassing grace and strength, and made adorable by the purity of their conceptions.

As time went on the Greek religious system lost its primitive simplicity and sank into a voluptuous decadence. We then find it swept by the powerful arms of world centralisation into playing a minor part in progress.

Imperial Rome spread her eagle wings over the then civilised world, and as they embraced a multitude of interests and ambitions, so they enfolded a multiplicity of faiths. Greek philosophy and morals helped the Romans to form their laws; but their ambition to conquer the world filled their mind and soul with schemes of aggrandisement, and all spiritual development was crushed by the hard hand of the materialist.

tion and obedience, was as insistent as the Egyptians' efforts to objectify the God they felt in all nature. These in their search for something tangible, turned to animals like the ape, the hawk, the beetle and the crocodile, which they regarded as divine manifestations claiming their adoration, and whose images they carved in stone. In their study of man and of the world, the Egyptians sought light in the higher spheres of which here we have but the shadows, and they are the first recorded people whose researches in chemistry and physics contained the germs of modern science.

Persia's teaching of immaculate purity upon the most ideal basis, although externally different, was animated by the same earnest desire to understand God. " Good thoughts, good deeds, good words, purity of mind, purity of heart, purity of action ", this is the key-note of the Zoroastrian faith. Figures consisting of the human body with many limbs, which were fashioned to symbolise the manifold powers of nature, extending rewards to the righteous, and instruments of torture to the wicked, testify to the incessant search for some outward and visible sign of man's inward and spiritual emotions.

The Hindu religion, we know, has revealed to the world the most profound spiritual realities. It teaches the immanence of God in the universe, and hence the unity of all life : two sides of one great truth. Whence follows the corollary of the brotherhood of man. These are the three fundamental verities — the second and third logically following from the first — on which the Hindu system is based.

India's realisation of the spiritual power of God grew so intense that men strove to subordinate body, senses and mind to the intuitions of the soul, which drew them away from the self with its inevitable suffering, to merge them in the life universal. This is the fundamental standpoint on which the Buddhistic teaching is based. Thus all phenomenal existence was seen to be nothing but passing reflections of a single unity. The invisible became wholly the real; and so ardent was the desire to reach beyond all bodily limitations, that physical activity to a large extent ceased, and the value of life in the world depreciated.

We can thus trace the religious systems of the Assyrians, Egyptians, Jews, Indians, Persians and other peoples, but the task is far easier when we come to the Greeks.

In Greece the predominant note in all moral, political and philosophical achievements was supplied by religion, which inspired the righteous motive and the moral code essential to a strong and consistent life, and endowed the latter with so spiritual and transcendent a beauty that all mankind can clearly trace therein the handiwork of God himself.

The philosopher advanced beyond the poet in his search for natural causes, and conceiving the world to be a unity, justified the imaginings of the latter who with a strong, simple and heartfelt beauty, all his own, revealed

If we examine some of the manifestations of the spirit of man searching for the light, we cannot doubt that, from the first, however much religious systems have differed in different parts of the world, there was implanted in human nature the sense of devotion to some invisible, creative ideal. If this ideal could not be seen or felt through the soul, then some material form of perfection had to be devised to embody the popular idea.

If we trace the history of image worship, from the faces and figures of the remote past, rude, grotesque and terrible, which tortured the imagination with a ghastly fear of the supernatural, down to the spiritual representations of Christ, the Madonna and all the saints and martyrs, who have been depicted by supreme artists with all the pathos of suffering, sacrifice and divine beauty, in bronze, ivory and colour, it is clear that religion has in successive ages ranged the whole gamut of human emotion. And this only proves the more that the human soul reaches often pathetically towards its Creator through graven images, when it sees no other way of interpreting his will and power.

There is no fault to find or criticism to be made of whatever form, symbol or material conception was devised, even from the earliest times up to the present day, if faith and confidence were inspired in the men who through these forms sought enlightenment. For we realise that at all times man has instinctively turned towards the Creator of the world with fear, trust and prayer, and searched through all material elements, if haply he might find him, in the assurance that the unseen Power is hidden in all phenomena, which are, in fact, its appearance-form; — just as it is the instinct of the new-born child to feel in the dark for its mother's breast, so that, all unconscious, it may be nourished by the flowing milk of life; and there for protection, in innocent, unknowing confidence, to nestle its soft, delicate limbs close to the body in which it was conceived.

Thus it is that in all ages religion has uplifted the soul and comforted the children of men by its divine purpose. Moses, Buddha, Confucius, Zoroaster, Christ, Mohammed, all speak with the voice and assurance of the same God. Though in different tongues, in symbolism of varied kinds, the same God inspired all, and the same " Kingdom " belongs to all.

Were we to examine all forms of worship that have led the world onward, should we not find that those of the East and of the West are alike everlasting rivers of divine truth and inspiration flowing into the same boundless sea of eternity? Rich in sublime thoughts that pierce the night of ignorance, veiled in a purity so righteous and appealing that they seem the very mantle of God, they gather together all humanity under their protection as one indissoluble whole. Beneath this spotless veil of righteous desire, East and West, North and South are met together. Prejudice vanishes in the blending of the mighty, sacred rivers of divine thought which, inspired by God, flow through the ages, enlightening the soul.

Thus we know that through this very weakness, this very lack of spiritual insight, this very craving for worldly possession, a new religion, beginning in the hollows of the earth, rose from an immortal grave into new life and vigour.

The beginning of a world centralisation of spiritual endeavour came through Jesus of Nazareth, who was the " Way " and the " Light " — a light that penetrates into the depths of the soul and brings a truer knowledge of the divine nature by disclosing the unity of God in all humanity; and which therefore is the sure guide of man's whole nature, as he reaches upwards to his Maker.

He gave mankind such an appealing message from the Creator whom he called " Father "; he spoke such comforting words telling of human brotherhood, that his divinity could not be doubted. Thus, as the Roman Empire was verging to its end, his teaching was laying the foundation of yet another empire destined to be so vast that the whole earth is not too large to be its pedestal.

When Pilate said, " Knowest thou not that I have power to crucify thee, and have power to release thee? " Christ replied : " Thou couldest have no power at all against me, except it were given thee from above, " — and without this power, humanity knows that it can do nothing. Therefore every truth and power that the human mind discovers, every kingdom built by human hands, every energy in nature or in man, as coming from above, is not only of practical, but of deeply religious significance.

We find the holy Messenger and Preacher of the new religion full of human sympathies, condemning no one. No prejudice, no malice found room in his great human heart; which seemed to be made of the essence of love and truth. When tempted by spies to speak against the imperialism of Roman laws, Christ, whom the Romans condemned to be crucified, replied with noble serenity : " Render unto Caesar the things which be Caesar's, and unto God the things which be God's. "

The attitude of Rome, and her persecution of those who, following Christ, would not bow down to the emperor and pay him divine honours as head of the State, are too well known to be repeated here. Yet it is of great importance to realise that it was owing to lack of spiritual power that the mighty Empire was destined to crumble into dust, and her proud monuments to be turned into mouldering spectral wrecks.

The vast scale of her desolate ruins, the huge remnants of her mighty edifices, so full of the *lacrimae rerum* — the tears that belong to all human things — attest the majestic grandeur of the ancient Mistress of the World. In her maturity Rome stands an imperishable monument to imperialism, law and diplomacy; but in her decline she teaches a world lesson of the insecurity of all human efforts that have no spiritual inspiration, herself a proof that we must be guided in all endeavours by the will of God.

righteousness by an invisible hand. Their purity and holiness were from the beginning conceived by the Almighty. Religion defines their spiritual mission more clearly. In the light of science superstition and unrighteous human motives disappear as rapidly as the morning dew beneath the sun's rays.

To bring together all religions in a temple, built with hands, would be to lay the first stone of a temple, not made with hands, wherein would be enshrined the Kingdom of Heaven upon earth, — a temple visible, not to the bodily eye, but to the soul's, crowned by a dome of righteous aspirations, fashioned of love and purity of spirit, and jewelled with tears of gratitude and joy.

A temple of religions, where all religious systems would be brought together and studied comparatively, so as to sift out the underlying verities which are common to all, would be able to form a grand synthesis of the highest conceptions of the universe and of man, put in a form to suit every day needs. A world-embracing religion, satisfying human reason by a true and comprehensive philosophy, raising art to its rightful and most appealing place in life, and using science as a foundation for the whole structure, would, it seems reasonable to think, finally crown its work with a noble morality. Applying the truths it had gathered, it would teach man why he should lead a pure and noble life, and why evil doing and evil thinking are against the divine order of things of which he himself forms a part. Satisfying all the varied spiritual needs that continually emerge throughout the world, it would surely give the light that could guide mankind through life to the very eminence of God.

It is certain that the religious system of the future will be a science, having as its foundation the great truth that Life, as a mode of energy, is eternal, and forms a single unity throughout the universe; and it must be wide enough to include metaphysics and psychology, as well as all the physical laws, which obtain here, and which may be inferred to exist in other worlds where evolution processes are doubtless proceeding.

In the divine kingdom, there are no aliens and no outcasts. In that grand household all are in their Father's house. When this truth has dawned upon all men (and upon the flower of humanity in every nation it is already dawning) then the conditions will become possible for a world faith, as they never have been before, and the sense of the unity of life, discerned by the growing nobility of the individual, and resting on an eternal basis of divine truths, will usher in the long sought Brotherhood of man.

A grand Temple of Religions, including the highest inspirations of all prophets of all nations and all times, would be a logical and practical means of uniting the great world family, and of bringing all God's people under the protection of his divine spirit. An inexhaustible fountain of priceless truths would flow freely out to the whole world, carrying the inspiration of noble endeavours and of pure morals, and giving confidence and peace to the trou-

The blending of all manifestations of spiritual thought and attainment is not only the dream of the idealist; it is the earnest desire of all mankind. Never before in the history of the world, have all people been so eager to unite in peaceful, spiritual relations; never was religion more valued than in the present day, for it is now better understood than ever before that there must be a spiritual basis to all the forces that move the world, otherwise man's strongest efforts are wasted, and his best powers enslaved. A definite religion is a necessity for human well-being; to inspire high and righteous morals and to give undying impetus to man's noblest aims; and aided by science and philosophy, it will ever seek to draw nearer to the truth.

It should in no wise be forgotten that science is one of the surest ways of strengthening faith and inspiring devotion. It raises humanity mentally and physically to higher spheres. It reveals the unity of force and matter, as far as we can penetrate, throughout the universe, as well as the great truth of the essential unity of all things. It is certain that politics and art will be inspired by it, and that humanity will learn to feel more definitely God working through man; for when he is found to exist and give all power from within, then he is seen and felt through the deeper senses of the soul, and is understood in all human efforts and in all visible things. Science, more completely than philosophy, proves the power of God, and brings us more directly into contact with it; therefore we must accept scientific facts. Science strengthens our faith, and reveals ever more clearly the laws governing the inscrutable power which is objectified in ourselves and in all external phenomena. We live in an age of science. Nothing that it produces but was foreseen by the Creator. Through science new light and assurance are given to man, and, as his faith increases, so does his consciousness of being part of the eternal energy that gives life to the universe.

We live, not in an age of miracles, but of miraculous accomplishments, and in so far as these are beneficial to all mankind, so are they righteous and God given. These miraculous accomplishments carry with them the objective proof of the divine power. It is therefore for us to welcome every forward step, both for ourselves, and for our posterity, whose inheritance will be enriched by our work.

The acknowledged need of collaboration in scientific research, indeed, in all human endeavours, compels us to have recourse to centralisation. By this means all human efforts and needs can be minutely examined and considered, and all the discords in man's conception of the deity eliminated, and an ultimate harmony reached that will draw us all towards a higher and nobler existence.

Towards this higher existence, through the eternal gates that separate the finite soul from the Infinite, all mankind must pass and approach the divine presence as a single unity, even as they were conceived from the beginning. Their strength comes through love and unity. They are guided on the path of



ÉTUDE POUR LA FAÇADE DU TEMPLE DES RELIGIONS

bled souls who anxiously desire to understand the teachings of the great thinkers and prophets of all times.

All sources must be drawn from, and all spiritual motives and teachings condensed into a clear, comprehensible unity, which, abounding in divine truths, and full of human sympathies and love, will become our guiding star through life, enfolding in its light all humanity as a single being, drawn close to its Creator.

This Temple of Religions was designed for the purpose of obtaining from all nations their highest conceptions and symbols, to the end that these may therein be studied, understood and appreciated. Large galleries are arranged for housing the emblems, tokens, vessels, etc. distinctive of the different faiths. Libraries are provided for housing the archives and sacred writings of all nations. Spacious Conference Halls open their doors to the whole world, inviting science, philosophy and art to join hand in hand in completing the teachings of all the seers and prophets of old. Congresses could continually be held, and the deeper and purer motives of all religions would be clearly brought to light in the endeavour more fully to understand the rich virtues and divine mission attaching to each; whereby a broader and stronger feeling of brotherly love would be generated.

DESCRIPTION OF THE TEMPLE OF RELIGIONS

As will be seen by consulting the plan of the Scientific Centre, the Temple of Religions and the International Court of Justice are symmetrically placed at an equal distance to right and left of the Tower of Progress, and a wide, open space extends in front of them. These are the two largest and most impressive buildings of this Centre, and they resemble each other in general plan and silhouette. They broaden slightly towards the rear, and present a curving façade to the Tower. A wide flight of steps leads to the main entrance which opens into a spacious rotunda. Above this rises an imposing dome, much higher than those of the Scientific Congress Buildings, supported by a colonnade and crowned by a lantern. Broad vestibules and two semicircular conference halls curve to right and left of the rotunda. The central part of the Temple of Religions is occupied by an immense Conference Hall in the shape of an elliptical amphitheatre. This hall, under a low dome, somewhat similar in form to that of the *Auditorium* in the Temple of Art, is capable of holding 5000 people, and like the latter has been carefully studied for its acoustics. A broad corridor completely surrounds the hall, and numerous entrances and exits allow rapid circulation. Following this corridor, which upon the outer side opens on to courtyards and gardens, an immense library is reached, which with adjoining reading-rooms, constitutes the whole rear of the building. These offer ample space

for sheltering and studying all the sacred writings and religious books of the world, and for preserving archives, documents and rare manuscripts.

The long and wide galleries which stretch from the front to the back of the building on both sides are, upon the ground floor, planned as administrative offices, delegates' offices, lecture rooms, conversation rooms, etc. Whereas the whole upper floor is intended for housing in spacious Museums the available religious symbols, statues and paintings that illustrate the progress of religions in all nations and at all times.

A gold bronze statue of Peace will surmount the dome, and the statues of the great teachers of religion from all countries will be placed upon the columns that decorate the exterior.

INTERNATIONAL COURT OF JUSTICE

In the endeavour to complete the whole conception of this world-embracing centre upon the strongest lines of human necessities, it is evident that an international Court of Justice could not be omitted.

The fact that so many beneficial international interests are already definitely organised and recognised as necessary to progress, and that many separate institutions, situated in different parts of the world, are internationally administered, points strongly to the advisability that the decision of controversial questions between them come under an international head.

Yet, it may be said that there has never been a general and concrete plan formulated by the governments to deal with the ever growing development of international organisms, either to protect their rights or to facilitate their just causes. Nevertheless all nations, directly and indirectly, benefit by their existence. Without a definite plan uniting their highest endeavours, centralising and studying their motives, it is hardly possible to obtain the full benefit of these international bodies or to formulate just laws to protect them.

Indeed the necessity of developing international laws for the rightful administration of the manifold interests that equally affect the progress of all nations, becomes more and more evident as being one of the most vital obligations for the prosperity as well as for the peace of the future.

Laws based upon a world community of interests will ever be sought for in the future development of science and culture, industry and transportation, and should not the whole be administered by the governments in unison, since the benefits realised are of use to them all?

A common centre, upon neutral ground, established to supply this increasingly vital demand, far from hindering, would undoubtedly develop the personality of states by facilitating their intercourse, their industries, their commerce and their social progress. Laws to protect these, could not

their utility, have become international, should be internationally protected; and for the administration of these laws, a common centre and a great International Court of Justice should exist.

It is not necessary to speculate here upon the possible forms that international law may take. That it will righteously develop through international cooperation, is evident. That there should be a centre of communication and action, appears obligatory. That such a centre should find the best ground for its growth in immediate touch with all the chief interests of humanity centralised is, it may be said, certain.

Moreover until such an international Court of Justice is established to protect peoples by broad and just laws, armies and navies cannot be abandoned, and the support of these is such a heavy drain upon the nations that they are continually held in an irritable state of mutual repulsion.

But when an international tribunal, endowed with the highest moral authority has been organised to administer international rights, it seems safe to say that there will only be the need of an army and navy of patrol to perform the function of international police, supported and respected by the whole civilised world.

The more rapidly the creation of an international world centre of science and higher culture can be pushed forward by public agitation the more surely and swiftly must a true means be found for establishing peace.

It was in consideration of these facts that an International Court of Justice was placed in the very heart of this "International World Centre of Communication".

DESCRIPTION OF THE INTERNATIONAL COURT OF JUSTICE

This Court of Justice, though resembling the Temple of Religions in elevation, has the practical changes made in the ground-plan as are suited to its purpose. In the centre, a large Court for General Meetings and four lesser Courts branching from it take the place of the immense central meeting hall in the Temple of Religions. Corridors, surrounding these, permit of quick circulation and of direct access into the great Library at the rear and into the other various offices that spread amply through the great wings of the building and surround the spacious courtyards and gardens. Careful study was given to making a commodious, practical interior of sufficient size to embrace the vast requirements that such a Palace for the convenience of all nations, should need, and to keeping the whole exterior very harmonious in line by the use of such proportions as make a quiet but monumental effect.

The tall and majestic dome is conceived as crowned by a large winged figure in gold bronze of Justice, as a balance to the statue of Peace upon the opposite Temple of Religions, and the façade as decorated with statues of the world's great legal authorities.

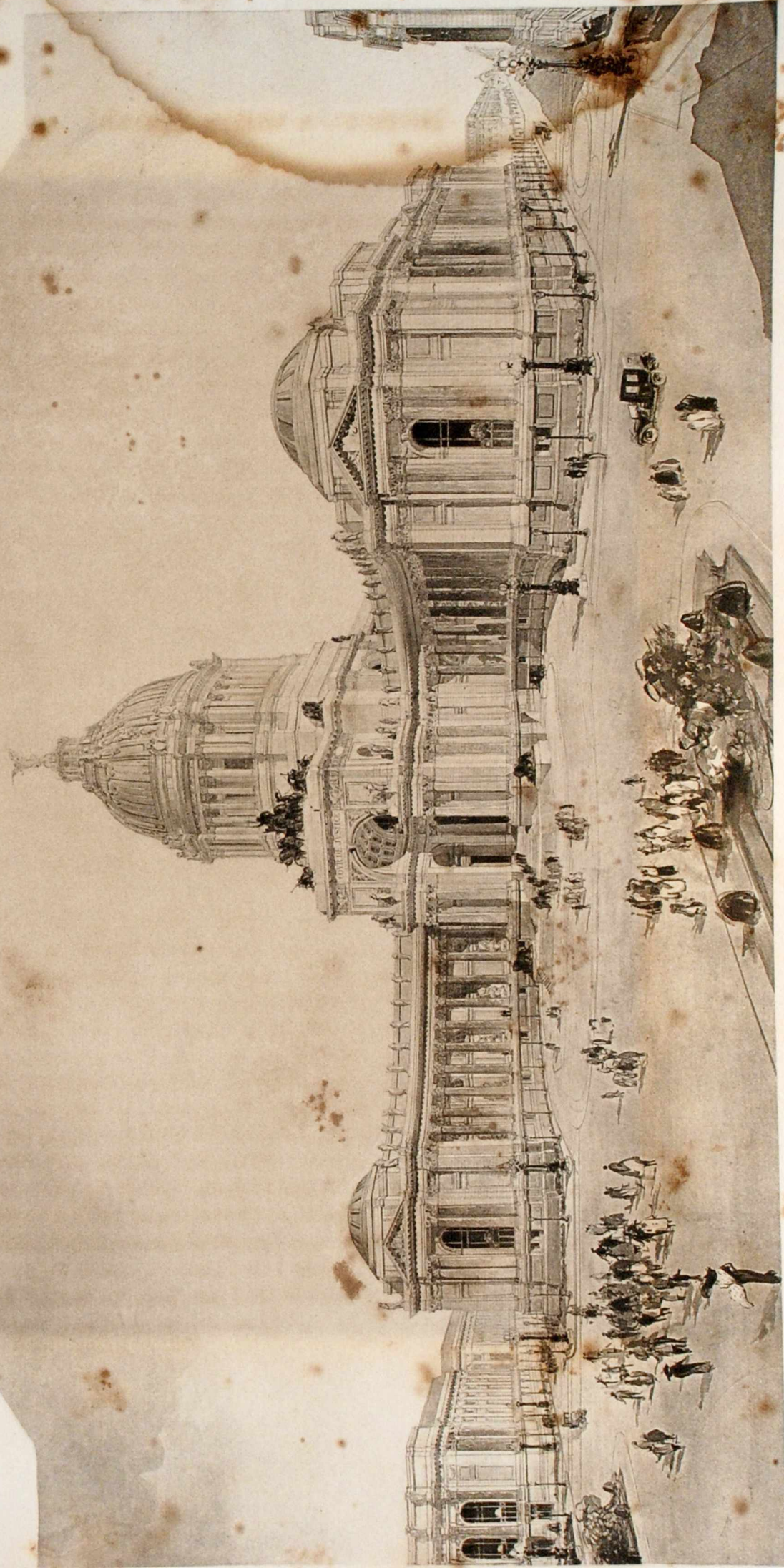
be formed by disloyalty to State laws or sovereignty, but could only be originated by universal cooperation and enforced by international administration. It may even be said that states refusing to cooperate in the protection of public health, and all world-wide economic and scientific interests, would only produce a stand-still in their own countries. When scientific or economic interests have so grown that, in order to succeed and develop, their operations must be extended over numerous national territories, such interests can only be effectively regulated by international law.

It is natural to believe that as soon as some adequate machinery is internationally sanctioned and established to facilitate the human need of expansion in all these branches of endeavour that this will give expression to the public conscience. And surely a tribunal expressing international sense of justice, is a surer means of establishing equity between nations than war which sacrifices lives, impoverishes countries, stagnates commerce and transportation, while mental and physical activities suffer incalculable loss. Commercial and industrial intercourse could be facilitated by the absence of irrational local differences in legal matters. Unfair competition could be prevented by the uniformity of national regulations, which would place competition, the world over, upon a higher plane, and would check the granting of entirely inequitable advantages to enterprises that are often created by some only to deprive others of their rights.

Surely transportation must in the future be regulated more and more by international cooperation. What for instance, has become more international than the transatlantic passenger, mail and freight traffic? Millions of lives are each year exposed to unforeseen dangers upon the several oceans. Companies and corporations, located in different states, undertake their transportation. Certain laws and regulations have been made obligatory, yet still accidents cause the loss of life, depriving people of all nations of their near relations and closest friends. The whole world is made to feel that it is indeed but one, great family, whose sympathy goes out to all the silent sufferers. Again international law has behind it the great voice of humanity appealing for protection, and the answer to this appeal can be greatly facilitated by international cooperation.

Adequate international laws can only be formed through universal agreement, and these can only become obligatory when the demand for international rights, for the just protection of life, food, health, communication, etc., becomes imperative. These interests, vital to human progress, go beyond all state borders and beyond sovereign power and control. They are universal interests, common to the higher development and progress of man, and therefore should be dealt with by a synthesis of the expert opinions of men from all countries.

More and more the world stands in need of just and honourable relations in the transaction of all human affairs. Interests which, by virtue of



ETUDE POUR LA FACADE DE LA HAUTE COUR DE JUSTICE

INTERNATIONAL BANK OR CLEARING HOUSE

The diffusion of humanity forces industry and commerce with such a strenuous arm to keep pace with its necessities that ever heavier obligations are thereby brought to bear upon the financial world.

The increasing difficulties which the countries have to-day in international exchange, definitely prove that an international understanding in regard to a universal standard of money is essential.

A more logical and practical solution of the money question is maturing, for the point of interest is less that of gaining a definite sum by the corruption of exchange, than of gaining a thousandfold more by creating a money standard that will facilitate industry and commerce throughout the world, aid their development and protect their rights, as well as relieve travellers of the frequent losses and annoyances due to differences in exchange.

Even as the need of a simple and unified system of weights and measures has led to persistent endeavours universally to establish the metric system, so the complications of an unequal money standard has led statesmen and bank directors from all countries to urge the utility of creating an international currency.

Therefore it is reasonable to foresee that some international agreement must sooner or later be arrived at. An International Bank or Clearing-House, created upon neutral ground, supported by international shares and contributions to meet these requirements in a simplified and just manner as well as to reduce the complications of exchange, has been discussed, and its practical desirability has been made evident.

Exactly what form such an institution should take, would be presumption and folly in the present work to lay down. It can only be said that some sort of international organisation creating, regulating and handling such a currency will clearly become inevitable. Therefore an imposing building has been planned as a necessary part of this centre with the assurance that through international cooperation, the ways and means of establishing an international currency could undoubtedly be arrived at and that such an accomplishment would wonderfully aid commercial relations. It is certain that the facilitation of commercial exchange renders more durable conditions of peace.

REFERENCE LIBRARY

Through international cooperation the laborious task already begun and manifestly impossible to any one nation, of gathering together the catalogues, and methods of research of all lands could be achieved. Thereby the whole range of human knowledge could gradually be brought into view. It

is evident to what extent such a library, collecting, cataloguing and supplying information concerning all works achieved in every nation, and indicating the exact location of all rare manuscripts and editions, would lighten the work of research. With an immense economy of effort, it would render the knowledge of the world accessible to all workers in all countries.

The incalculable value of the work to be achieved in unison, prompted the placing of an International Reference Library in immediate communication with the palaces of Science, Religion and Justice, the Tower of Progress and the Institutes of Higher Learning.

INTERNATIONAL REFERENCE LIBRARY AND BANK OR CLEARING HOUSE

These large structures form the last of the imposing palaces which surround the Tower of Progress. Their principal entrances face one another on either side of the large avenue leading to the city. Seen from the foot of the Tower they will appear as a pylon, framing the entrance of the vast Congress Square. These two buildings, though like the Court of Justice and the Temple of Religions they are to some degree similar to one another in general plan and in elevation, are technically divided and spaced to meet the different requirements they were conceived to answer.

Both Bank and Library are surmounted by a dome vertically bisected, the parts of which, symmetrically placed opposite one another, cover the chief room in each building: — a vast semicircular hall which is, in one, the Exchange, in the other the Distributing-room. To right and left are galleries and spacious offices, opening into courtyards which give abundant light and air to the various administrative offices. There is also in each an ample conference hall for international gatherings, and in the two buildings respectively, great safe-deposit vaults and fire-proof store-rooms.

THE TOWER OF PROGRESS AND WORLD PRESS

Towers and spires have throughout time with silent dignity marked the progress of humanity. They have denoted the pride and ambitions of peoples in all epochs, their strength and their faith, their hopes and their religion. The higher men conceived the obelisk, the minaret, the tower and the dome, the more magnificent were the results. Spires, domes and towers represent a human appeal, and typify humanity reaching upward from its earthly toil and strife towards a higher goal.

As we read the sacred scriptures, we find a record of human endeavour so colossal in its conception that it invigorates the imagination, and this precious record of men striving to build a city and a tower whose top may

essential to all peoples and nations, and a central source should be controlled by international cooperation. In immediate touch with the highest authorities in all branches of science, medicine, law, religion, economics, industry, education, a World Press would form a powerful, clear World Voice, vibrating from the very heart of a centre in which all nations could impartially be represented.

Though independent news centres exist in the various parts of the world and press associations centralise information in the several countries, there seems to be the growing need of a common centre facilitating the communication of all events and achievements of general importance, and controlled by international delegates and representatives to supply the journals of every nation with indisputable facts.

An International News Bureau, controlled by cooperation, would surely meet an increasing and world-wide demand. Its practical utility would be universally felt. Certainly it would be considered one of the greatest necessities of a World Centre of Communication. For this reason the whole substructure of this colossal Tower is planned for the largest and most modern printing machines. Editors' rooms, translators and illustrators departments are amply provided for, as well as reporters rooms, telegraph offices, underground communications for distributing journals to different parts of the city and expressing them to the railroad stations. Wireless telegraphy, facilitated by the soaring height of the Tower, is abundantly provided. Communication could thus be rapidly received from all parts of the world and as rapidly distributed. Daily, weekly and monthly journals could be published by international cooperation that would be of the greatest value to scientific men and to the world at large. The discourses pronounced during congresses would have the advantage of immediate publication and circulation, spreading the results of scientific investigation in all directions. Reporters could continually receive information directly from the highest authorities in all departments.

This Tower of Progress was conceived to be of practical utility to men of all nations : — to record their requirements and to plead their causes, to protect the inventor and the worker and to look after their essential economic needs, to be the intermediate between the capitalist and the labourer, to protect their rights and to plead their case before the world, to increase the development of hygiene, to make possible more elevated social conditions, and, above all, to uplift the oppressed and to harmonise all human efforts.

In the numerous offices of the many stories of this Tower, the well organised international societies that already exist could unite and find ample, airy rooms and every modern appliance and invention for rapid communication, at long distance by means of the Wireless System of telegraphy, and with the private and public conference halls of the surrounding Congress Buildings. Should the members of the Red-Cross, for instance, occupying

reach the heavens indicates in all ages an aspiration, presumptuous though it sometimes may be, towards the divine.

This record runs, " And the people said, Let us build us a city, and a tower whose top may reach unto heaven, and let us make us a name lest we be scattered abroad upon the face of the whole earth. " Even as, " the Lord said, Behold the people is one and they have all one language, and this is what they begin to do : now nothing will be restrained from them which they have imagined to do. "

Though these people have left us the testimony of their aspirations and accomplishment, and have been scattered over the face of the earth, yet the desire to build a city and a tower grows ever greater, and the reason, fundamentally the same, is to unite all human efforts and attain the kingdom of heaven from within and not from without.

Nothing that the human mind conceives is without reason or divine motive power and attraction. We again conceive our city and our tower with the endeavour to unite the ambitions of peoples towards one grand common cause, drawing them from all parts of the earth to facilitate their expansion through unity and fellowship and to secure their aims upon broad, human lines. Notwithstanding the confusion of speech, we have a security of purpose that has a silent, unspoken language of its own.

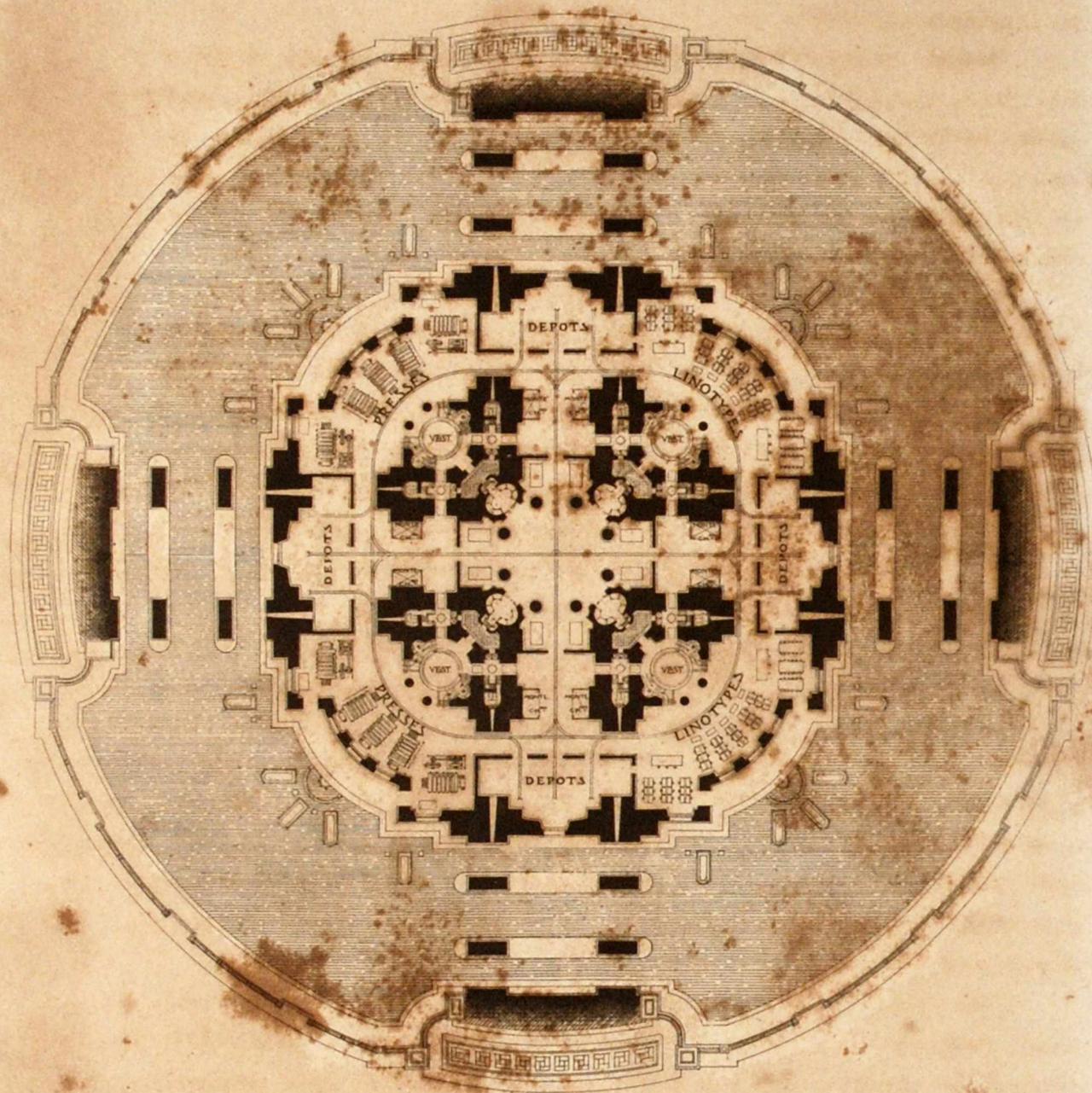
The greater the ambitions of men become, the higher must their symbol reach; the nobler their faith, the further, through enlightenment and truth, must the light therefrom radiate, until the darkest parts of the world are illumined by the divine insight and genius of man. Truth, Love and Justice should spread from the Tower we build, expanding their radiant light through all humanity, and a powerful voice should ring out with faith and assurance, freely distributing knowledge to gratify the great human desire for advancement.

If this Tower of Progress can unite men's efforts and stand through the ages as a symbol of human love and growth, through it the Kingdom of Heaven may more securely be attained. With faith in a righteous cause, nothing can destroy men's endeavours. We begin again our Tower with the purpose of constructing a symbolic monument. This, like an appealing human arm, reaches from the earth high into the heavens, not with a vain desire for glory or reward, but to construct a symbol of truth and equality that shall unite the endeavours of all nations.

In this building science comes to our aid and facilitates our upward aim. The higher we construct, the more science comes to our assistance : the conducting antennae, like finger tips above the clouds, lead the invisible currents of human endeavour down to the powerful lungs of the World Press, which again with magic rapidity, breathes throughout the world the record of human accomplishments and desires.

The many advantages of a World Press forming the heart of an International World Centre, are obvious. Rapid and reliable communications are

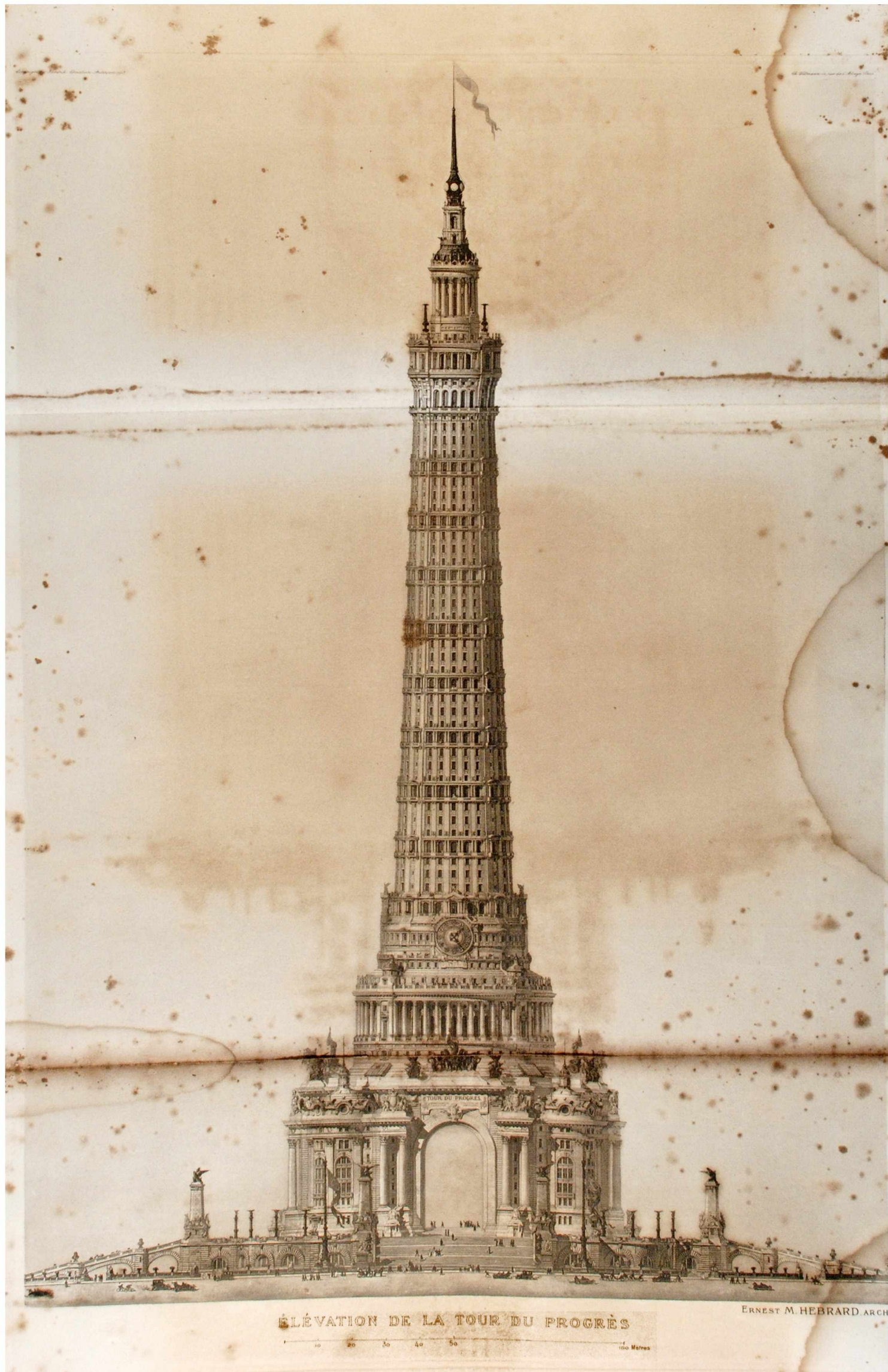
their rooms on the fortieth story, care to hear a conference taking place in the large Hall of the Medical and Surgical Congress Building, they could do so through the electric receiver that conducts the voice of the lecturer to all parts of the Tower and of the surrounding buildings where connection is



GROUND PLAN OF THE TOWER OF PROGRESS

desired. All these palaces, almost adjoining, are nevertheless connected by rapid underground communication, from centre to centre, from library to library, etc. Books and small parcels can be despatched at an instant's notice by pneumatic tubes. The whole structure of the Tower is of steel, stone, cement and bronze, even book-cases and doors being of these materials, and is heated from an outside centre which can be regulated according to the demand.

In fact, every modern scientific invention that conduces to comfort, safety



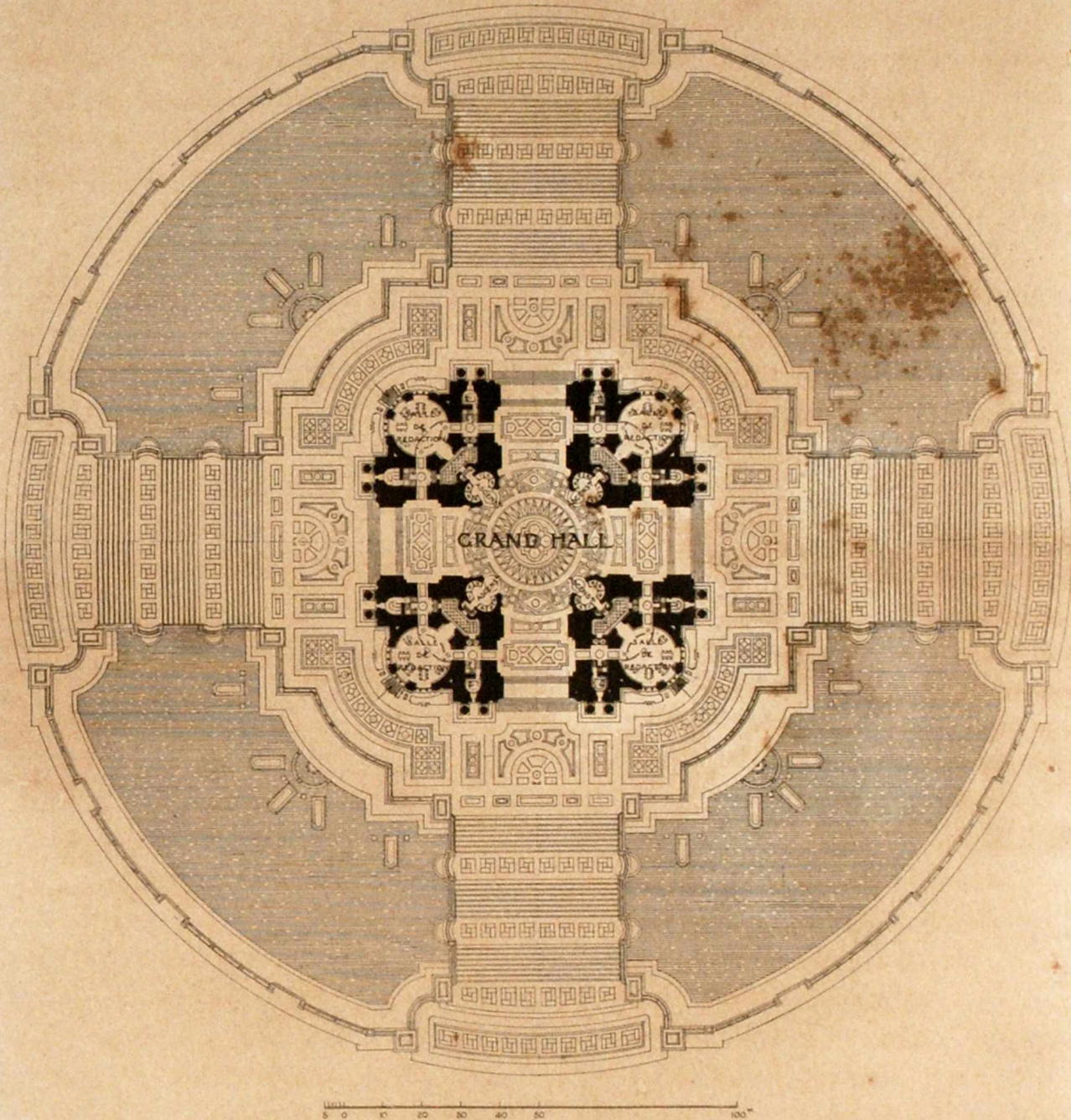
ÉLEVATION DE LA TOUR DU PROGRÈS

ERNEST M. HEBRARD ARCH

10 20 30 40 50 100 Mètres

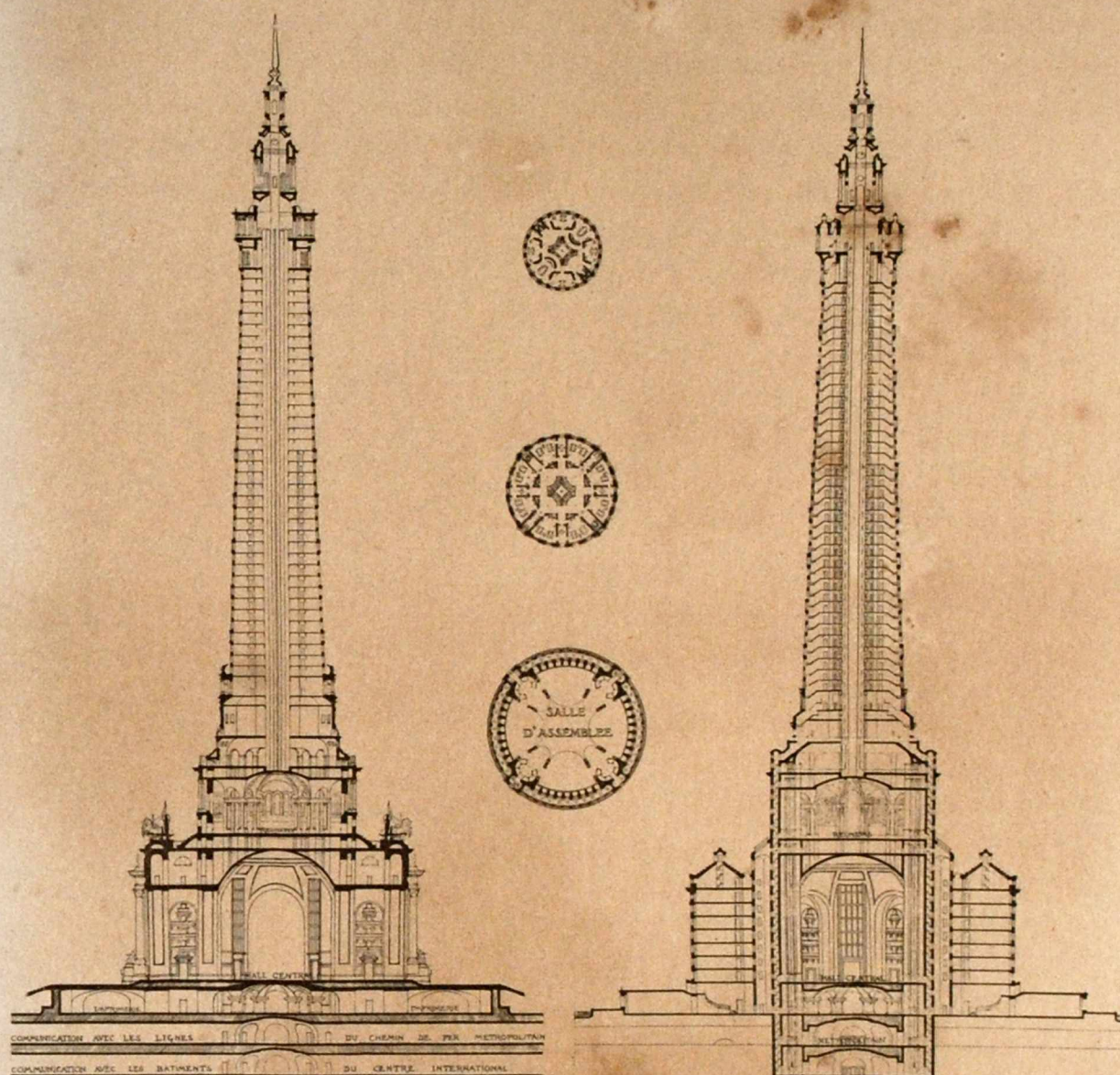
and rapidity of communication is utilised. Thus the Tower of Progress will be a marvel of practical engineering as well as a beautiful monument for recording the advancement and unity of human culture and progress.

If the conception of this great Tower should appear too idealistic, it



was yet built upon a practical and scientific basis. It is like a bee-hive to which would come the honey extracted from the richest flowers of progress to be again so distributed to humanity, that sweetness and virtue may return to the world of human needs and desires. In fact, the whole structure of the Tower was conceived as a living, vibrating organism of steel, bronze and stone, reaching high into the heavens as a mighty human arm imploring the invisible Divinity for Light, Protection, Justice and Truth.

the printing rooms, the railway stations and the wireless telegraphy bureau, afford accommodation in groups of private offices for the international delegates of the Press. Here editors and the necessary staff representing each country, could assemble, and obtain information from a central source



SECTIONS OF THE TOWER OF PROGRESS

continually supplied by incessant communications from all parts of the world.

Moreover, the succession of congresses in science, art, education, sport and social movements of all kinds, would offer the Press the opportunity of following every phase of the latest achievements, in whatever country they might originate. At the same time, all branches of activity would have the advantage of being swiftly and duly reported to the people of all nations.

Above the Great Hall acceded to by the four monumental doors between the pavillions, an Assembly Hall is designed for general meetings. Above this begin the many stories, planned in four sections forming suites

DESCRIPTION OF THE TOWER OF PROGRESS

The Tower stands upon a circular base in the centre of the vast Scientific Congress Square, and rises to the height of some 320 metres. The ground plan is that of a cross within a circle. The waters of the "Fountain of Life", which flow through the Avenue of the Nations, surround its base. A circular moat is traversed by four ornamental bridges that lead to a terrace at its foot. This terrace covers an immense underground story and a basement.

Upon the terrace level, a circular hall forms the ground floor. It is entered through four monumental doors which correspond to the four bridges. For ceiling it has a cupola 40 metres high. Twenty four lifts lead from this floor to the second terrace above it. Between the four monumental doors are four circular pavillions of seven stories each. These contain commodious and airy offices.

Above the first is a second, smaller hall of the same shape. This opens on to a peristyle promenade from which a view of the surroundings may be obtained. From this hall the Tower rises with one sweep to the summit, like a round column slightly more slender towards the top. A central supply of sixteen lifts ascends to the uppermost floor. The many stories are each divided into four sections, and each section contains a complete suite of offices. Between these sections run corridors in the shape of a cross ending in staircases. The top story projects slightly above the lower ones and forms quite a wide terrace, with four lanterns at the sides. Still above it rises a spire topped by a cupola and lantern. From this point a powerful light may project its rays over the city and surrounding country. Apparatus for wireless telegraphy is abundantly supplied.

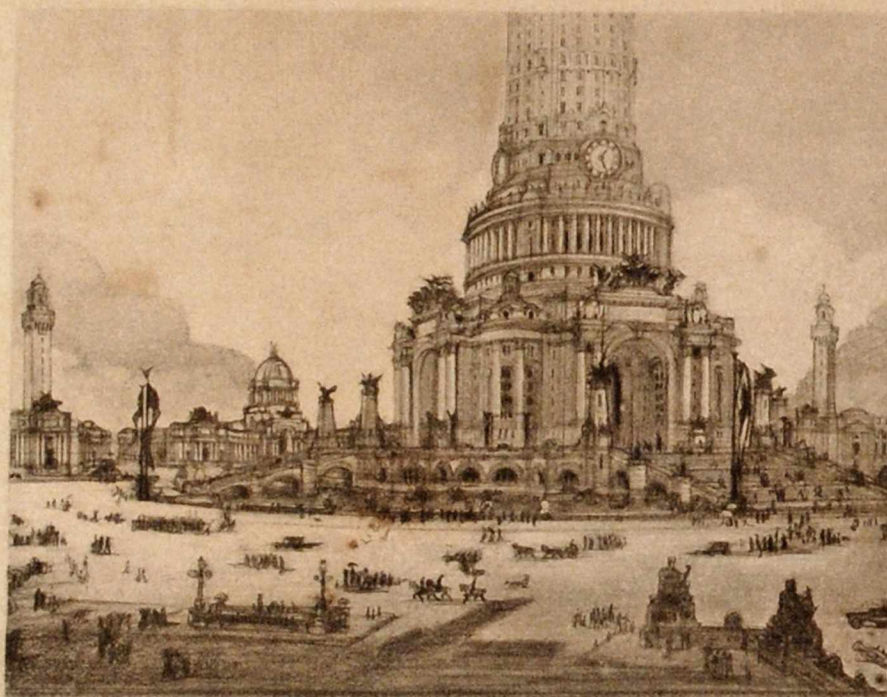
The basement of the Tower communicates directly with two branches of the Underground Railway, three stations of which open into the Congress Square. One of these branches, running upon one level, communicates with every important building of the entire International Centre; the other, upon a lower level, with the Railway Station and all parts of the city.

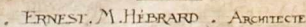
Beneath the first terrace of the Tower, the underground story, of colossal proportions and well lighted from above and from the sides, is dedicated to the installation of printing machines adequate in size and capacity to serve the purposes of a World Press, producing daily, weekly and monthly journals in many languages. Like the upper stories, this vast space is divided into four sections, which may be subdivided according to the requirements. Special lifts connect it with the four corner pavillions of seven stories each, which buttress the lower corners of the Tower.

These Pavillions, furnished with airy offices, and closely connected with

of offices. If desired, however, these suites, can be divided into smaller groups or single rooms. These offices, offering the fullest advantages of light and air as well as the magnificence of a view over all the surrounding country, can be heated from an outside centre, in the manner shown in a foot-note and diagram accompanying the « City ». They are planned for the convenience of existing or still to be formed International Associations that desire the economy of time and effort afforded by immediate communication with affiliated interests and by centralised management.

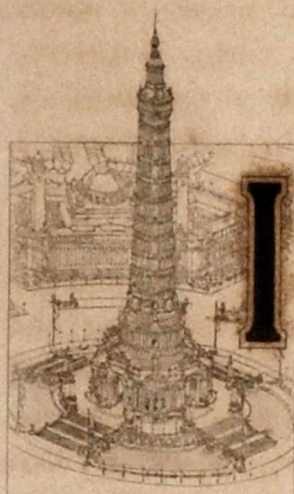
Thus this Tower, though colossal in its proportions and honey-combed like a bee-hive, is planned upon wholly practical lines and for definite uses. It is conceived not only as the central monument of this International Centre and City, but as symbolising the Epoch of Unification, through world concentration of effort.







THE CITY



TOWER OF PROGRESS

It may be said that the grouping of huts or tents in order to house tribes and to protect them, both from the natural elements and from outside enemies, was the modest beginning of city planning. It may also be added that fixed enclosures, hindering tribes from free roving in the open air, gave the first opportunity for the development of disease, and all the evils that contaminate body and mind. It is now well known that more lives have been destroyed by lack of light, air and cleanliness than by invading armies.

Early history and modern excavations prove that many notable cities of the past were designed upon definite and comprehensive lines. Others grew up at hap-hazard. Some five thousand years ago, the Egyptians planned cities in a simple and orderly manner. The Greeks also laid out their capital and chief towns with a practical and monumental yet spontaneous grandeur. Athens, Olympia, Delphi, Delos, Ephesus, etc. stood as examples.

Yet, as we trace the annals of building in Egypt, Greece and throughout the Roman Empire, we find that although many cities possessed magnificent temples and edifices as central monuments, the citizens and slaves were for the most part obliged to dwell in small, dark, badly ventilated habitations. Only the ruler and a small number of his subjects enjoyed the luxury of well built houses.

Indeed, modern city planning cannot draw its best forms from the ancients, for to-day there is the growing demand for expansion, for free circulation, and for the security of the life and property of vast numbers of people, who need protection less against the enemy outside their walls than against those within, which, in the form of disease and immorality, ravage populations. Modern planners of cities have the task of creating new beauties adapted to the changed conditions.

One may be sure that great progress will be made. The tendency of the present is to consider city planning more and more from a scientific point of view. Soon it will undoubtedly be treated as an absolute science. Already the sympathies of men and women who understand the requirements of life, have been awakened, and the mind of thinkers has been turned towards providing for the needs of the great masses of people who are attracted in ever larger numbers towards the centres of civilisation. The amount of cubic space, hygienically proportionate to the needs of the people both in and out of doors, free access to public baths, laundries, hospitals, churches, theatres, lecture halls and markets according to popular needs, all the various spaces necessary for human rest and relaxation, are considerations that in the last few years have been acknowledged by the world.

That the sections of a city be laid out according to the employment of the people living therein appears more and more to be desirable in order that these may, to the greatest extent possible find their requirements met. In the present day, it is no longer a question of erecting a group of palatial residences for an elect few only, but of providing means that the whole population may enjoy light, air, opportunities for natural recreation, and all the conveniences which facilitate their activities. For every individual life seeks expression, and surroundings are often a determining force in the expression which it will give.

It is with these considerations in view, that this City, planned to house the population which would naturally be attracted to an international World Centre, was arranged in the following manner.

As will be seen by referring to the general plan, the Tower of Progress, rising in the midst of the Congress Square, forms the heart of both International Centre and City. Long avenues radiating from it in all directions, connect every part of the latter with the monumental group. This last, as was noted in the first chapter, is divided from the residential, business and industrial quarters by a broad canal surrounding it on three sides and traversed by bridges.

The adjacent city is divided into zones, each containing several sections or quarters. These zones are likewise separated from one another by broad belts of water. The outermost of these forms a wide, navigable canal, connecting the sea with the inland basins for commerce, which lie at the further extremity of the town.

The same may be said of Mediaeval towns. Enclosed and protected by massive walls, the dwellings were perforce crowded together between narrow streets. Castle and church dominated the whole. Nevertheless, the division of the population into classes permitted a certain order to exist. Towns and villages, like human beings, had their individuality — an individuality infused into every line and form by the energy and culture of the people who inhabited them, for at all times, nothing so clearly illustrates the character of peoples as their dwellings.

As nations gradually formed and their position became secure, this change in political conditions made city walls unnecessary. The full significance, however, of the possibilities thereby opened to city planning could only become apparent when the means for rapid circulation made expansion upon a vast scale imperative. In the movement towards greater centralisations, cities spread miles beyond their original boundaries. Absorbing neighbouring towns and villages and covering the adjacent suburbs with dwellings, they formed heterogeneous groups. The charming individuality of many a town was swallowed in this evolutionary change, which, to a large extent, took place spontaneously, forced by the demands of increasing humanity. Growing at some points rapidly, at others slowly, cities frequently had portions crushed and half choked by the development of neighbouring quarters. Many of these latter were built to serve the interests of individual owners, without restrictions and without regard for the common needs of the people who would inhabit them. It may be said that in cities throughout the world, the hovels and slums in which large numbers of the population are obliged to live and bring up their children, far from the sight and pleasure of green fields, and often pathetically crowded into close, ill ventilated rooms, offer the most fertile ground for disease, crime and degeneration.

But civic art is the expression of civic life, and it seems safe to say that cities in the future will not grow up fortuitously as has too often been the case in the past. It is now being realised that it is more advantageous and economical to build towns with forethought than to allow them to grow up at hap-hazard at the caprice of corporations, ambitious industrial enterprises, or organisations that only care for human life as a means for developing fortunes. Undoubtedly modern requirements will necessitate that all cities be built upon definite plans, and each one will have its individuality according to the expression that is dominant in the will of the people.

If we survey the plans of many European towns and capitals, founded at different periods, their individuality is clearly apparent, and so deep is the interest they awaken, so picturesque their beauty, that the tendency to imitate them becomes almost irresistible. The informal beauty that resulted from unconscious growth, proceeded, however, from conditions which, for the most part, no longer exist. To reproduce them, therefore, becomes often but a vain affectation.

starting at the business section, traverse the residential quarters and end in two large parks bordering the sea. These would make a handsome setting for the two cathedrals, indicated on the plan.

Thick masses of verdure, in the form of a long band of parks, gardens and play-grounds, bordering the second canal, separate the one zone from the other. Directly connected, however, with the Railway Station, the navigable canal and business quarters, are the freight depots, gas and power-

and 5, which will be provided with static transformers. But these sub-stations will also receive steam at high pressure from another quarter : from the special boiler houses B C D E for the sub-stations 1, 2, 3, 4, and from the principal boiler house A for the sub-station 5.

The steam produced in the boiler-houses at the pressure of 10 kilos, will have a drop of pressure of 2 kilos on full load. The steam received at 8 kilos will be expanded in the turbo alternators to a maximum pressure of 1 kilo, pressure under which it will then be distributed in each district for heating purposes. During the winter, the turbo alternators in each sub-station will supply the quantity of electric current which, by its previous expansion, the quantity of steam used for heating may have produced. The static transformers will supply the surplus. For the full amount of heating, each of these stations 1 2 3 and 4, will thus use about 240 000 kgs of steam an hour, while producing 7 000 k. w. Sub-station 5 will use 120 000 kgs of steam while producing 3 500 k. w. Each of these stations will be provided with turbo alternators thus distributed :

Stations 1 2 3 4: 3 turbo alt. 2000 k. w.

1 turbo alt. 1000 k. w.

Station 5: 3 turbo alt. of 1000 k. w.

1 turbo alt. of 500 k. w.

In these conditions, a good efficiency can be obtained whatever the load. The space necessary for the sub-stations will be : 800 m² for No 1 2 3 and 4, and 500 m² for No 5.

The annex boiler-houses will each produce 130 000 kgs of steam an hour, and will contain boilers with a total heating surface of 6 700 m², occupying a space of 1000 m². The total surface of each of these boiler-houses is approximately 2 000 m². Each of these groups of boilers will also provide the steam necessary for special services such as laundries, steam cooking, disinfecting in the hospitals and other neighbouring buildings. The circulation of hot water, heated by a part of the economisers and by the exhaust steam from the auxilliary machines in the boiler-house, will provide heat for these same buildings.

The annex boiler-houses will be provided with the same improvements in the system of draft and for separating the substances of the gases as the main boiler-house. They will burn the coke furnished by the city gashouse, and if this is insufficient, hard coal will be added. If this supply is small or difficult to obtain, special measures will be taken to provide smoke consuming hearths.

DISTRIBUTION OF EXHAUST STEAM THROUGHOUT THE CITY

The steam is distributed by means of pipes under the sidewalks. A pressure regulator will be placed at the entrance of each building. Steam will be sold by the weight, the measure of the condensed water being taken by means of a meter. The distributing pipes will be so joined that at any point they can be fed from both sides. Under these conditions an injury to the pipes can only paralyse the service for a very short time and within a very limited area.

THE PRODUCING CAPACITY OF THE INSTALLATION

The loss of heat in the transportation of steam at high pressure is :

From B to 1 and from D to 3, 5 %.

From C to 2 and from E to 4, 8 %.

From A to 5, 2, 5 %.

In the transportation of exhaust steam, the condensation in the pipes may reach 15 to 20 % of the consumption of heat.

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The Terminal Railway Station, lying on the main axis of the plan and opposite the Civic Centre, is widely accessible. Above ground, it forms the radiating point of a network of broad avenues, which are to the greatest extent possible to be kept free from rails. Under ground, it communicates with sub-stations, placed in immediate connection with all the principal buildings of the International Centre and with the several quarters of each zone. Two branches of the main lines of rail which come into the city from a distance, are carried under ground, to the right and left, as far as the sea. By these simple lines of communication, none of the heavy traffic need be carried on above ground. The navigable canal, however, furnishes an additional mode for the transportation of freight.

The Civic Centre is situated in the first zone, and lies opposite, though at an adequate distance from the Terminal Railway Station. It is designed with a great square which will be surrounded by public buildings, such as the City Hall, the Court of Justice, Post-Office, Public Library, etc. From this centre spread the principle boulevards upon which hotels, theatres, concert halls and the largest shops may be built.

To right and left of this business and administrative section, are the residence quarters, six in number, capable of holding from 100 000 to 120 000 inhabitants each. These are planned according to the checker-board system, which has been found to be the most convenient since motor power has superseded animal traction. It will be noted that each section has its own central square, about which ample space is allotted for those buildings for the public service which are essential to the needs of the people, such as the administrative buildings, schools, libraries, conference halls, markets, theatres, churches, etc. Each quarter is supplied with heat from a central station on the outskirts of the town, thus avoiding the nuisance of smoke and gas and greatly facilitating sanitary conditions¹. Long, straight avenues,

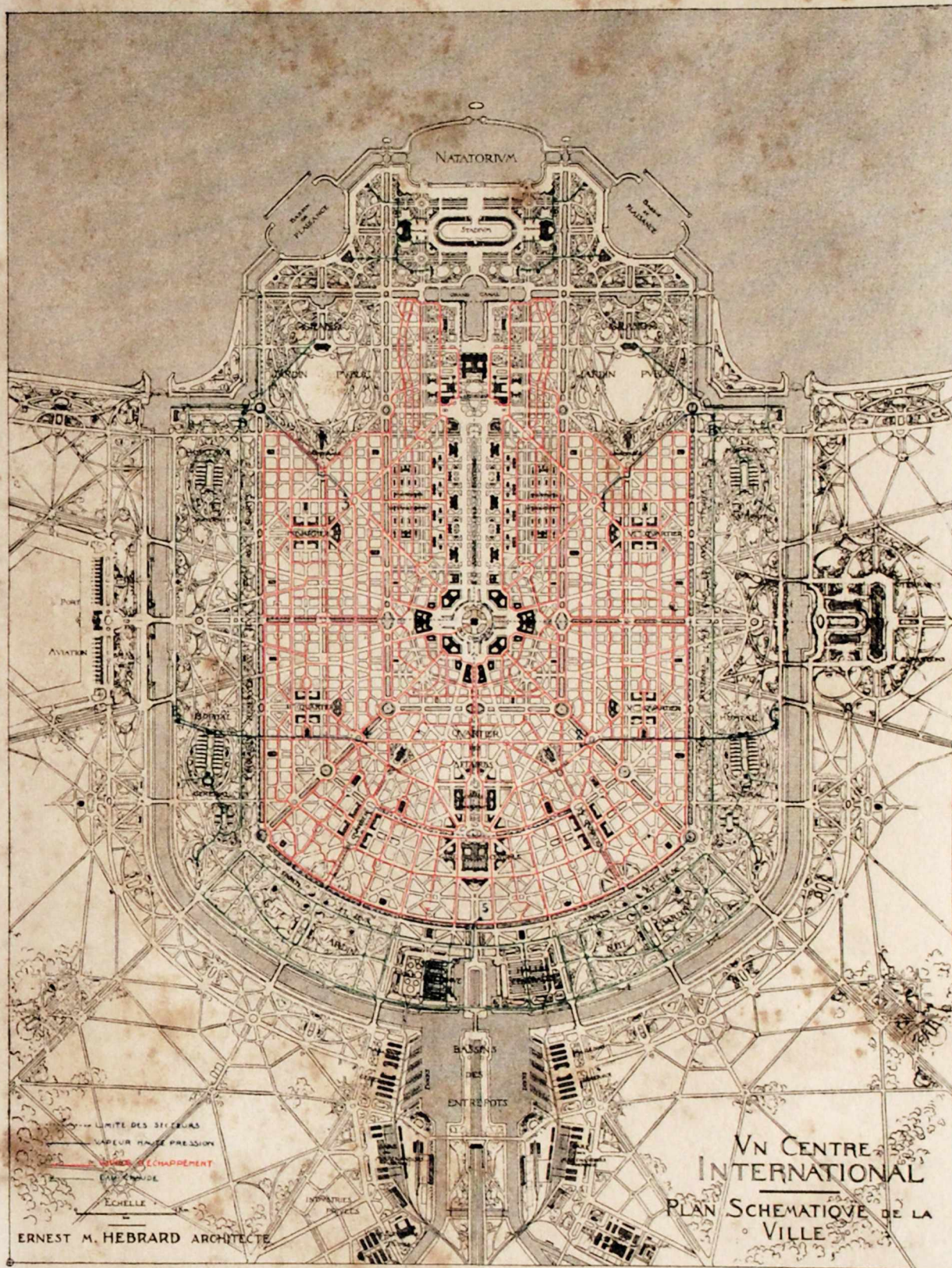
1. The heating would be combined with the production of the electric current necessary for the several services of the city. It would be installed in a central station A, capable of furnishing all the electric energy needed by a population of some 500 000 inhabitants. The production would reach a maximum power estimated at 50 000 k. w. For instance, the station may include 5 turbo alternators of 8 000 k. w. and 4 of 2 500 k. w. This will permit machinery with economical bearings to function, whatever be the total load of the power house. The turbines are run by condensing water taken from the canal.

High pressure steam will be furnished them by a group of 25 generators of a total heating surface of 22 000 m² and occupying a space of 3 000 m². The space needed for the turbines, alternators and their accessory organs being 1 500 m², adding the space required for the coal recipient and that foreseen as necessary for use in the future, the total space required for the Central Station will be 9 000 m².

The boilers will be provided with economisers for heating the feed water. A certain number of economisers will be used for heating the water of a circuit, assuring the heating of the industrial quarters and those inhabited by the workmen. The heating of this circuit will be completed by the condensation of the exhaust steam from the auxiliary motors of the power-house. The gases from the boilers may thus be evacuated at a very low temperature, 100 to 150. The draft will be mechanically obtained. Deposit chambers will collect the substances contained in the gases in such manner that only almost pure carbonic acid will be evacuated.

The Central Station A, will furnish the high tension current to the sub-stations 1, 2, 3, 4,

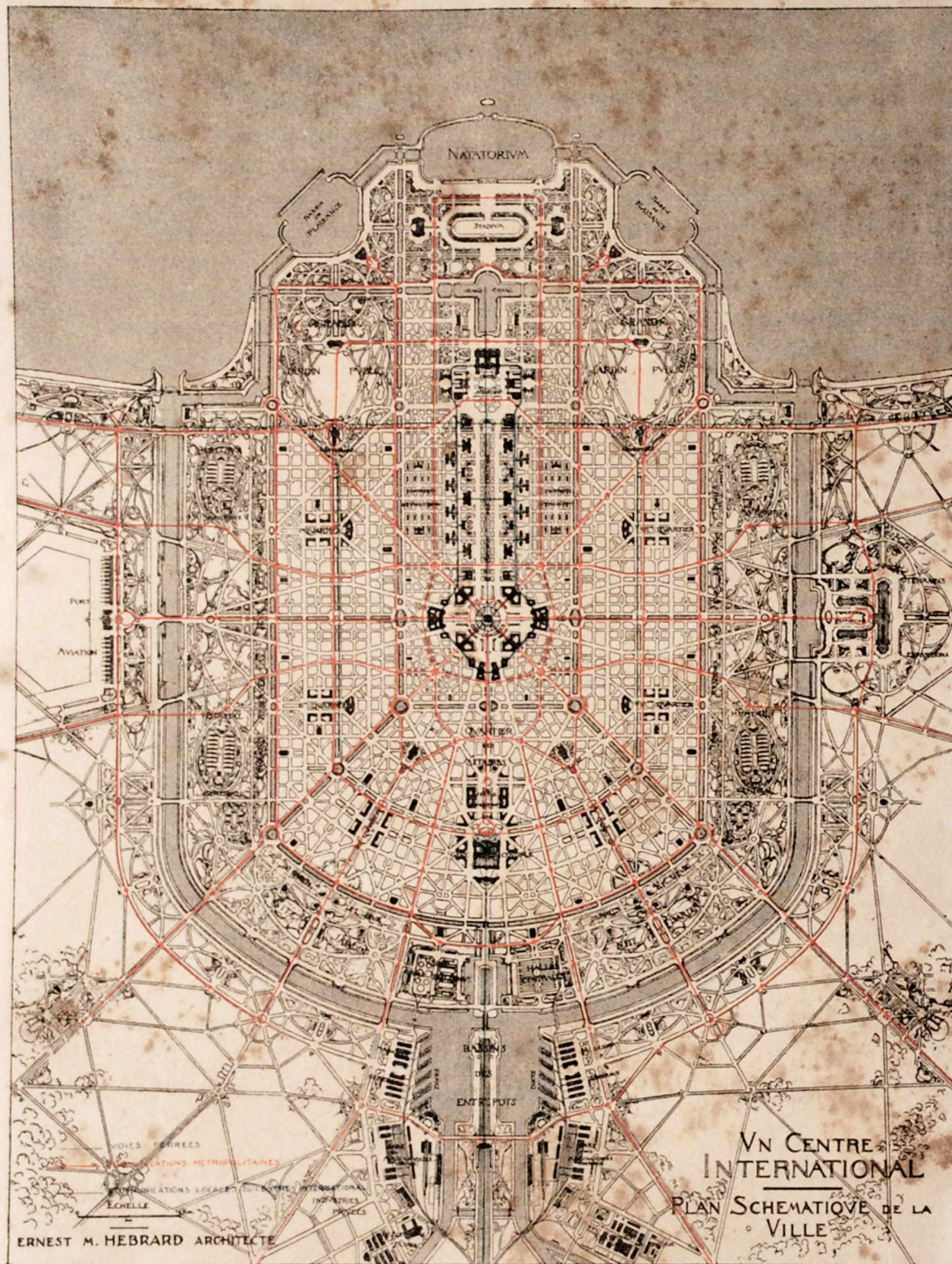
greatly enriched by parks and recreation grounds, begin the garden-cities.



PLAN OF THE CITY, SHOWING THE HEATING SYSTEM

Stretching towards the sea, in spaces and invariably wooded, spread the hospital and sanatorium grounds, burying grounds, etc.

houses, as well as the coal and wood-yards, the slaughter-houses etc. All



PLAN OF THE CITY, SHOWING THE UNDERGROUND COMMUNICATIONS

these have been carefully studied with a view to making them practical and advantageous in their relation to the whole plan. To right and left, and



APPEAL

IN all nations, in all times, the foundation that has supported human inspirations in the achievement of the highest aims, has been and will always be spiritual. Knowing therefore from the testimony of past history that without spirituality the human desire must ultimately fail of its purpose, we realise that through international cooperation the attainment of the essential desires of men and of states could be greatly facilitated. An earnest appeal is therefore made that these plans be carefully considered as a practical means of uniting the efforts of men upon a spiritual and economic basis.

From the beginning of time we have noted the fusion of people from small, isolated groups into common centres, and this centralisation has directed their aims, broadened their views and facilitated their expansion in commerce, industry and culture. When they have remained isolated, their energies have been arrested, and we find no definite progress made in either industry or culture. Left out of the direct current they become, like water turned aside from the flowing stream, stagnant, unhealthy and infected. Simple and direct means of communication, deeper and more fraternal relations upon ever broader spiritual and economic lines would therefore seem more and more essential to life and to the energies of man.

Nothing should break the bonds of human affection. Although there may be differences of opinions, social and political, mental and economical between nation and nation, there is the assurance that, in spite of these differences, the highest aims of all real leaders of men are fundamentally built

Beyond the navigable canal, are the industrial quarters, and towards the open country, stretch the garden-suburbs. Each of these is provided with its own schools, markets, libraries, churches, theatres, recreation grounds, and the necessary administrative buildings. The dwellings are placed [in the midst of greenery and stand singly or in groups, in such manner that light and air may penetrate profusely. Reached by the navigable canal as well as by underground rail, these garden-suburbs thus enable workingmen and women to enjoy pleasant and healthful conditions, while being within easy range of both city and industrial quarters. They are, moreover, so placed that they can be indefinitely extended. Indeed, the whole city, by the formation of new nuclei in direct communication with the centre, may spread to whatever extent is found desirable. Adjoining the suburbs are upon one side, vast grounds for aviation, upon the other, open spaces for exhibitions.

Thus, radiating from the Tower of Progress, the several parts of the city permit of free circulation from one to another, and provide the residents of each quarter with the chief necessities conducive to health and to the enjoyment of life. Centralising the public services, they offer to all alike the needed opportunities for intellectual and physical development and recreation. At the same time, kept broadly within these lines, each can have its own individuality as strongly marked as may be desired by the will of the people. Rising in their midst, seen from afar, and forming the central point of view from all the long avenues that radiate from it through the city into the open country, the Tower of Progress, 320 metres in height, forms the commemorative "Signal" symbolising the onward progress of humanity.



lopment and the psychical entity which lies at the back of national life, and gives it strength, unity and force can never be dispensed with. To get rid of these would be as unreasonable as to take the foundations from beneath a tower and expect it to retain its equilibrium.

As was said before, valuable contributions pour in from every side. Ideal suggestions as well as practical methods for assuring closer and more harmonious relations are forthcoming in such abundance that a universal endeavour is manifest to establish a centre, or fountain, of human knowledge from which the whole world may quench its unceasing thirst for enlightenment and righteousness. Already the vision of universal cooperation is dawning upon us clearly, inspiring higher motives upon broader human lines. Millions are working together quietly towards the organisation of a world unity : and it would seem that this unity must have been divinely foreseen from the beginning, for we find everywhere men working actively and instinctively for the formation of wider and wider spheres of affiliation.

It will be found that the centre of communication, here planned, is suggested as a means of meeting this great demand. Such a centre must of necessity be world-wide in its scope, and therefore international. It need not interfere with state politics or existing laws, but, on the other hand it would lend inestimable assistance to every social and political endeavour interesting the whole world.

Each nation would remain the same : in constitution and customs no abdication of sovereignty, or any kind of dictation would be imposed upon countries, or states.

A common centre for collecting and imparting the most essential human requirements, a centre in which states and men may freely communicate with each other, a centre open and of easy access, that registers and preserves the statistics of human progress, must benefit all countries and all men. And what seems most appealing and reassuring is that such a world centre would be like a world heart through which the highest human efforts would flow, be purified and return to nourish and promote the ever increasing demand for science, truth and enlightenment. It is undeniable that through the creation of international organisation protecting and guiding all the interests of human life a broader feeling of assurance is provided. This world unity of interests will go far to lessen the necessity of war; for the incentive to the latter will become weaker as the bonds of community between nations increase by economic and industrial ties or by scientific cooperation.

We have seen the beginning of individual efforts to call into being international centres in many directions which benefit the progress both of men and nations. We have seen the formation of International Institutes of Agriculture, of international centres of various universally acknowledged interests, such as the White and Red Cross, the Society " Autour du Monde " at Paris, the Labour Unions, the Office Central des Institutions Internatio-

upon spiritual as well as upon economic motives which are world-wide in their scope, and more and more tend towards peace and progress. If nations prefer to live as large separate families, they have every right to do so; yet without the advantages of communication and comparison their children will not be able to develop and grow mentally and physically strong and robust.

No boundaries can hinder the expansion of the human mind. No law can prevent the human intellect from developing; and to-day thanks to rapid communication, all centres of the inhabited world come within easy reach. Knowledge is gained through ever more rapid and economic means; thus increasing a thousandfold the desire to take advantage of the special privileges offered by other states and countries, which, but a few years ago, were not within the range of possibility. Whereas then three per cent only of the human race could receive the privilege of studying the arts, science and natural development of other peoples, to-day the ways that connect nation with nation are open so widely that all parts of the world come within immediate and economical reach of all mankind. Those who have higher aims than that of serving individual or local objects, and who in the past have worked separately and isolatedly, and, too often in consequence, have worked in vain, have in modern times used the broad and open roads that lead from country to country. Each country opens its heart to receive them and to show them freely the accumulated treasures of mind in art and science from which it develops and builds.

Thus nations give and take and are mutually benefited by the highest endeavours of each. We look with pride upon our statesmen, artists and scientists, and watch with interest the effect of our achievements as they are received by other nations. For national pride will never leave the heart of man, and national endeavour will only be strengthened as the pacific relationships of nations progress. Yet, there seems to be in people's minds a general sense that the time has come for the nations to understand each other better and that there should be a central point of interchange, a common centre of communication. Innumerable books and statistics full of possibilities and abounding in suggestions, are continually being published; and carefully reasoned arguments convince the nations that unity of purpose and endeavour, in art, science and commerce can but enrich and expand the interests of each.

All scientific facts are now diffused and taught clearly and accurately in most parts of the inhabited world. Therefore, henceforth, no voice that appeals to human needs can remain unheard. Every national achievement, almost before its birth, is heralded by the Press with trumpet notes, which vibrate round the world. This only proves that, in spite of national distinctions, the highest endeavours of man are international property.

The fact that inventions and discoveries can be rapidly transmitted and utilised by all who need them, often sustains and invigorates a people that otherwise would weaken and decay. The traditions of orderly deve-

confused and better understood. Religion, science and culture cannot move upon separate roads : they are now seen to be interdependent, and it is by their harmonious blending that the great task assigned to man becomes fully comprehensible. Progressive men of all nations desire easier means of communication and of contact with their fellow workers in all parts of the world; they want prompt information concerning all branches of science and art. Higher education becomes more and more obligatory as the world goes forward and increases in population. The ever growing demand depends for its supply upon achievements quickly gained, and quickly communicated, and it is incumbent on men of science and culture to meet this need — a need identical throughout the world, but unfortunately not always easy to fulfil.

When once the utility of such a centre is generally recognised, there will, we think, be no lack of funds to construct and support it. Although internationalism is not forced upon the world, it may now be said to be indispensable.

Another question that would be benefited by the establishment of an international world centre, would be the increasing tendency towards the abolition of war. A common centre should be provided, a universal information bureau, centralising all pacific efforts and focussing such movements and desires — a great, central communication bureau, receiving all the most valuable suggestions and arguments in favour of peace and impartially distributing them — an organisation or School of Peace, built by international cooperation receiving delegates from all nations. Such an international world-federation, or Peace Centre, would at once become the means of facilitating high aims and motives upon broader lines and of presenting them impartially to the world.

The most intelligent statesmen of our age as well as the most philanthropic helpers of humanity are everywhere uniting in contributing valuable scientific arguments, and large sums of money to peace movements. Should they not have a common world centre if they are to benefit all mankind? Should they not be organised as a most vital part of the great world movement, if their aims are for universal peace? Should not all rulers and governments listen to their appeal? Through a definite world organisation, their object must become more generally understood. Peace makers and originators need to become a consolidated unit. They need organisation upon international bases and through international cooperation. They need centralisation and unity of purpose, for they represent a great cause, and they must have their appeals echoed and diffused throughout the world. To be universal, should they not formulate upon international, not upon local lines, advantageous suggestions and expand the practical advantages of peace? Should they not present ideals that, besides being spiritual, have all those economic and practical qualities that are indispensable for success, and thus

nales at Brussels, the Permanent Peace Bureau at Berne, the Interparliamentary Union, the Pan-American in Washington, the Court of Arbitration at the Hague, and others. They all contribute towards one common cause; they all aim at unification and equality of interests; they all seek to simplify the progress of human endeavours.

The existing institutions are well organised, and are being constantly added to; but the widely expressed opinion of many practical and enlightened people is that these are too scattered and far apart, too difficult of access, and with too little unity of organisation to make any general harmony of action possible. Therefore, it would seem certain that the creation of a common centre, uniting all international endeavours upon the widest lines of practical utility would be very largely welcomed as a decided step in advance.

The great desideratum would seem to be that all international interests should be centralised and housed in one city, which open to and supported by the world at large, should collect, and then freely impart the best that is known and thought on all subjects of human endeavour.

Rapid communication would be one of its most appealing benefits, affecting all branches of science and industry and bringing the whole world of endeavour within reach of the possibility of rapid, scientific cooperation. Commerce and transportation would be unquestionably facilitated upon broader and more economic lines and give a greater impetus to capital and labour, the most vital of human requirements. Science and invention would become more rapidly diffused throughout the world. Culture and higher education, so eagerly sought for and so essential to the development of state and man, would draw from a central source proceeding from the broadest and deepest intellects of men.

Religion, so appealing to the spiritual progress of all peoples, would embrace the whole world of divine teachings and, through a more profound study of the creeds and philosophies of all time, would facilitate a clearer understanding of ethics.

Art, music and drama, that denote so clearly the motives of humanity, inspire the profoundest of sympathies and create the strongest of human ideals, could here unite and provide for one of the greatest and most noble of human obligations : the elevation of the ideal in man and the infusion of love and sympathy in the universal soul.

Physical culture would here find broader lines upon which to develop and would spread a more logical understanding of the utility of endowing the body with strength and courage. Nothing is so essential to life as the development of symmetrical beauty, lending the necessary energy, self-reliance and buoyancy to humanity for the fulfilment of its great mission upon earth.

Through science and religion the sense of this mission is becoming less

life, cannot disappear until something higher and more efficient has taken its place. So it would seem wiser to prevent the unrighteous dealings of men, rather than to cure them by the painful surgery of war, which — be it remembered — does not exclude a recurrence of the malady.

In spite of national differences, wars and sacrifice of human life, grander and world-embracing aims of centralisation must develop. Nations cannot always be enemies. There must in some near future, be a neutral meeting ground, extra territorial and common to all nations, where they may meet, communicate and discuss upon a friendly, liberal basis; a spot consecrated to the union of universal human endeavour, in an attempt to facilitate the progress of the present and to lend a surer guiding hand to the unopened eyes of the future.

Every patriotic grave brings vividly back to our vision the sacrifice of human life for an ideal. Every human heart yearns for fellowship and unity. Suffering and Sacrifice should give us greater faith, more strength and a deeper security in the belief that the unification of all spiritual and intellectual efforts is and always will be guided by the invisible hand of God.

If a world centre could be created to benefit all humanity, to protect all the different rights and endeavours of men and states, to facilitate and expand industry and commerce, to promptly communicate to all countries the latest achievements in science and culture, — a common centre of communication, built upon world-embracing, monumental lines, — would not this be a great bond with far-reaching beneficent effects? Would not the people of all nations willingly subscribe towards a means of increasingly extending their own rights, and of receiving direct profits from the same? Would they not aid in securing this form of protection? And how can it be attained, if not by mutual consent?

If such a world centre as is here proposed were to be built by universal sanction, it is almost safe to say that armaments would be reduced a thousandfold, and that the ever dreaded war questions would in the end become things of the past.

As the nations of the world unite in defending their best interests, so the maintenance of armies and navies will itself gradually cease to be necessary.

A centre established with the simplest and most far-reaching means of facilitating unity of effort and arbitration, is not suggested as a protest against war, but in the hope that by determining and promoting peace, justice and progress, it may become a substitute for war.

The building of this International Centre, by international agreement and contribution, would go far towards establishing justice and peace in all nations. We are ever hoping to advance beyond the questions of war. We are ever becoming more closely bound to one another, not only by human sympathies, but by practical and economic relations. The rapid develop-

gain the sympathy of rulers by scientific reasoning proving to them that the interests of men and states will be better secured by means of the affiliation of mankind? Only upon the establishment of a world-cooperative, administrative institution can the progress of peace be fully assured. And until peace movements are united in one great centre guiding and sanctioning human activities and until their motives are shown to be of world interest, much of their work will be in vain, and national armaments will increase.

Not that the construction and maintenance of armaments is harmful in itself. This is not disputable by any reasonable man. Pacifists may denounce the multiplication of deadly machines for the protection of the social and political right of states as against all spiritual progress; they may stigmatise it as a bloody and degrading way of protecting industry and commerce; they may point to the desolation and suffering inflicted by war; they may enlist the sympathies of many thinking people, and their position may be almost irrefutable: nevertheless, the world's expenditure for military preparations will continue to increase by leaps and bounds, until some higher form of protection has been found, whereby conflicting claims may be equitably settled, and peaceful development assured to all mankind.

The idealist is constantly proposing schemes for the reduction of armaments. He dreams of the immense energy that might be thus set free and directed into wider channels of progress towards the higher and more advantageous requirements of humanity. How far the idealist may be right and the practical man wrong, is a question we need not here discuss. But, unless idealism, with all its claim to be heard, is built on a practical and economic basis, "Dreadnoughts" and all the inventions of modern warfare must continue to increase. Humanity may protest, but its voice is lost in the roar of the whirlpool which the practical man calls: "Necessity".

There must, however, come a limit to what is now generally considered by the pacifist as a useless waste of human endeavour and of money. Yet this limit will only be safely reached when some means more righteous than war have been discovered for protecting the interests and well-being of the nations. When an adequate substitute is forthcoming, then and not till then, will the heavy armoured burden of war, that tends to break the backbone of both man and state be lightened, and the prospects of peace be brought within practical realisation. It is in the nature of man to fight, and he will fight for his rights. Yet, if he may obtain his rights without fighting, his mind and soul rejoice. For, though a war may be honourable and just from a material and human standpoint, the God in man's inmost soul is ever crying out for peace and goodwill upon earth. It is the cry of our higher nature which is always striving to create ideals for the benefit of humanity. Hitherto, recourse to arms, or in other words, a trial of strength, has been the only ultimate form of protest against international injustice; and this method, which is, in fact, nature's law for all forms of

in solving the questions between capital and labour, that have become and are becoming world-wide problems of international importance. The questions of child labour, of long hours in badly ventilated establishments, of labour that injures health and life, of hygienic conditions, of insurance, in fact, all labour questions should be studied scientifically and humanely, and a common world centre would undoubtedly go far in giving solutions from a world synthesis of opinion, thus preventing the ever dreaded question of war between capital and labour : for such wars can become the most degrading and bloody in the history of the world, affecting all classes.

In these days we are continually on the verge of this war. The question is one of the gravest in the history of peoples, — not a war between nation and nation but a contest between capital and labour in all nations ; for the very fact of the continual diffusion of labour and of the vital need of capital affects not only the state in which local interests are created, but the equilibrium of the whole civilised world. The labourers of all nations, in spite of government or national differences, are being joined together by strengthening bonds of fellowship, and those of one country as of another are demanding the same justice and the same rights as well as the same recompense for their efforts.

Men have freed themselves from despotism and slavery, on which they look back with horror and repulsion. They turn with eager eyes and willing hands towards higher achievements and ideals. They are guided by a more divine mission than ever before. All their attainments both physical and spiritual are essential to their progress. The streams of human blood spilt in war have been dried by the sun of righteous endeavours. But these righteous endeavours must finally receive a just reward, which can only be determined by a careful study of men's demands.

Capitalists also need and demand protection, but the very fact of their capital gives them the security and the protection of state institutions that too often have provided them with the means of making slaves of their dependents. It is known that though often the labouring man has more than he earns or should have, yet more often he is reduced to extreme poverty by capitalists who turn him into the slave, his accomplishments into gold, his spirit into mud, — for nothing can so quickly destroy all spiritual insight as slavery and poverty. It turns the man into the beast. It induces corruption and blurs ideals. It sinks the human body into deplorable decadence, physical and mental. It invites crime. It degenerates the healthy energies of man and undermines all his highest ambitions.

The age of despotism, slavery and terror remains indelibly graven in the minds of men. The human cries of the past for liberty and justice, the groans of suffering and agony, still cause the heart to bleed with compassion and shame. Shall all this have been in vain? Shall despotism and slavery come under a new disguise? Will they not surely be detected whatever

ment of industry and commerce, by its very nature draws nations into inseparable connection; and it is only reasonable to believe that they, with the increasing need of harmony in their economic relations, will need less and less to rely upon arms to settle disputes that may arise through difference of opinion. The growing net-work of intercommunication which girdles the globe and minimises distance, of itself suggests the most vital of obligations, that of organised centralisation and cooperation.

Yet chief among the reasons for this necessity in the future is not even the ever dreaded war between nation and nation, for slowly, the people are, by their own strength, imposing war, not upon other nations, but upon their own.

In all countries of the world the great majority of people belong to the labouring classes, which are the very motor power of national achievements in industry and in the welfare of the State, besides being the real producers of capital. The labouring classes to-day can build or destroy a world. They can destroy the peace of a country, or give it all its essential rights and comforts. They can prevent communication or extend it. They can produce crops to feed the world, or withhold them. The whole building of the future depends upon working men. Yet hitherto they have had to fight with the kings of industry, whose slaves they were. Many of their demands are just and right, and they turn to state rulers for protection. The great capitalists also appeal to government, and often they too are in the right and the wage-earner in the wrong. At the same time the latter is not less often right in resisting tyrannical oppression, and in fighting for the just demands which he will in the end obtain. His demand as well as his suffering rings out beyond the city and country in which he lives. Both touch the heart and mind of all earnest men. The builders of cathedrals, capitols, railways and industries have the right to live at any rate decently. They must have the means of adequately feeding, clothing and educating their children. Health, strength and hygienic rules are essential to good work, and labourers are often deprived of these by the very nature of their employment. They tolerate much, and are ready to tolerate more, but when they are driven to the wall by unrighteous claims, industrial wars must inevitably ensue, — wars that rend the nation asunder, and throw out of gear all the machinery of international commerce.

Yet this vast human industrial organ that can crush the world, itself ever searches for a just administration. Should it look to the heads of the nation for which it labours and which it gives its life and strength to justify? Or should it look to the kings of industry? Is not this a question of international interest that the nations through collaboration and cooperation should study and decide?

National interest and law can do much, but the rapid growth of continually developing international interests will undoubtedly be able to do more

It is for this reason that the appeal is made to the world to take this great question of vital human interests resolutely into consideration, to join together to study it carefully upon a scientific basis, to cooperate to facilitate and create new laws, — international laws that will protect the labourer as well as the capitalist by the most human methods for the benefit of all mankind.

And for this reason, among innumerable others, it was thought desirable in connection with the many interests here united to plan an international court of justice in which a World Court could be established for the protection of the interests and rights of international organisations, and for the expansion of industry, commerce and transportation.

Nothing can so entirely render justice to human efforts as an international consensus of opinion. Men feel themselves belonging to one great family and realise ever more clearly their intimate relationship; and they are beginning to feel the need of some central legal authority.

It is almost needless to say how essential a World International Court can be to the nations. More and more states and peoples demand it, and the sense of the necessity of such a court is growing so strong in the minds of men, that it is but a question of time before it will be finally established. We must lay the foundation stones for the generations of the future; we must guide them as though they were our own children, for in reality, they are a part of ourselves. Prejudice and personal as well as national vanity must be laid aside to give a higher impetus to all human motives and to spread justice, righteousness and peace to all parts of the inhabited world. The establishment of such a Court of International Justice, protected by international legislation, would undoubtedly supply the cooperation of nations with an invaluable protection. It would respect and protect all international rights and aims by a world sanction of opinion, built upon lines of equity and by the unity of the expert knowledge of international legal luminaries. Commercial and industrial interests could be protected by the scientific study of their essential needs, a study at close range aided by international cooperation; thus a definite step would be taken towards universal peace.

Avoiding all possible interference with state laws, an international board of delegates, represented by the ablest men of each nation, with a scientific knowledge of law, would soon establish an International World Court, so essential to men and to states and so reassuring to the progress of the future that it would stand as one of the most humane monuments of all ages.

Shall we acknowledge our brother and deny him? Shall we not rather unite from all parts of the world to build a kingdom of human endeavour upon the solid rock of human obligations, and be inspired in the building by the appealing voice of the multitudes, whose righteous demand weaves a world harmony of purpose, a mental and physical unity, created by ever clearer spiritual motives?

their counterfeit? Will not the revolt against them be infinitely more bloody, degrading and terrible, if they are not unmasked and crushed? Is it not the desire of all nations to mete out to operatives a just award?

The labourer looks eagerly forward for the governments of all nations to settle this vital question. He feels the need for suggestion and counsel emanating from some central power. If possible, he wants his wrongs righted by the highest scientific and human authority, by those who can see the spiritual and material outcome of his labour, who can put him upon a sure basis of realising the benefit of his efforts so that he may be able to produce, maintain and educate his family healthily and hygienically, and that his old age may be secured against poverty and degradation. He will follow the leaders of nations when he feels that these make an effort to understand his need and requirements.

When men serve governments, the latter are bound to protect them. But when they serve corporations, these bodies often handle them as they please, in carrying out their own desires and aims, which as history proves, are not unfrequently corrupt and unjust. Even when protected by laws, the labourer is sometimes reduced to starvation and degradation.

It is true, of course, that a great number of technical disputes of labour and capital can only be rightly dealt with through local law and administration; yet the questions of more than local, or even national, importance are constantly increasing; and these are so vital in the development and progress of all mankind, that they necessarily become international.

The appeal for world unification of effort grows slowly but surely. Despotism and slavery are things of the past. Science and progress have taken the place of ignorance and stagnation. All industries, to extend their sphere of activity, depend upon capital. The great army of workers that gives its strength and life to building it no less than capitalists themselves must be protected by a juster organisation, built upon ideas of sympathy, and framed on an international, scientific basis by united governmental legislation. The strongest human sympathies, outside family ties, must be directed towards the great duty of uniting all working people of all nations as they toil upward from poverty. Their welfare means peace and prosperity to all countries.

A World Centre of Communication, open to all nations for the purpose of encouraging the highest human sympathies, for the reception of delegates capable of making a scientific and economic study of the labourer and the capitalist and of their essential needs and requirements would aid in forming a practical and ideal solution of the world-perplexing question of labour and capital and would do more to prevent war, crime, degradation, degeneration and starvation than any possible thing that the human mind can conceive. By the mere fact of this prevention and by giving a righteous solution and value to all human efforts, it would give the strongest impetus to the spiritual, educational and social requirements that are so earnestly sought for by all men.

built and formed by the most impartial human understanding, economically and intellectually, scientifically as well as spiritually, for only upon these just lines will the men of all nations be guided, if they are to unite in reality to live in peace and harmony and to respect liberty and justice.

The economic value of such a centre would be undeniable; its practical utility unquestionable; its use in forming a stronger bond out of the ever increasing desires of men to develop and utilise the full strength of their ability, — a reality : whilst the terrible development of prejudices that exist like powerful walls between nation and nation, would be almost entirely obliterated from the face of the earth. Invisible strong arms forming a human chain, would circle the whole world and unite its people and their endeavours by one strong link, which through their spiritual and righteous efforts, could and would lay the great foundation stone for building a worldly kingdom inspired by love and fellowship, and by the incontrovertible assurance that it is for us to give the Kingdom of God within us a comprehensive, material existence upon earth by our own efforts, strengthened by peace, justice and unity.



The most positive ideal of our day is undoubtedly that the whole earth shall become in the future a field of action for every man, and that the advantages secured by the concentrated efforts of humanity shall be utilised to bring nations into better economic relations. The principle of giving and taking will become more and more beneficial. The world consensus of high living in art, science and industry tends ever to facilitate the progress and destiny of man, and to bring about a greater unity, and a clearer understanding of the purpose of his mission. We are all God's chosen people, and we are beginning to realise our mission more deeply and fully. We feel more surely its divine nature and we work more earnestly in performing it, now that the great truth is coming home to us that the Kingdom of Heaven must be built from within, in this life. We are given the privilege and the means of accomplishing this great work. Shall we not go about it with faith and good will? Has the past meant nothing but a confusion of conflicting obligations, stained with personal aggrandisement? Has it through the *via dolorosa* of blood and tears, through suffering, sacrifice and martyrdom, with all the strength of human endeavour groping in the dark, won for us nothing but greater material strength? Are we still building Kingdoms upon the sandy foundations of entangled personal ambitions, only waiting for the great sea of human progress to sweep in and overthrow them? Can we still stand boldly before God, and deny the mission that the soul of man strives to fulfil? Can we go on sacrificing human endeavour and strength, and waste the energy of human inspirations, and let blood flow again in rivers of sacrifice?

It must, now become clear to all men and rulers of men that without a common centre, organised upon a general basis of approval, centralising and uniting the highest motives in man's endeavours, — strength and effort are both wasted.

As was said at the outset, no existing conditions can or need be swept away, without being replaced by some definite and more advantageous system.

The expense to each nation for the construction and support of such a centre as here outlined would be but an atom in comparison with the advantages to be derived. Each State supplied with a permanent, durable, monumental building, would be enabled to keep in practical touch with the whole world of vital activities. The expense of supporting ambassadors and delegates as well as scientific and economic specialists in all branches of industry and culture, would be entirely counterbalanced by the economy in time, money and effort that would be made possible by centralised management and immediate communication.

Therefore a strong appeal is made to all rulers in all governments of the world to think of this great question of a World Capital City as a solution to the most vital of human demands, that is : unity of purpose,

Yet, should it seem desirable that this centre be established inland, Belgium, Holland and Switzerland can also be mentioned for their central situation and their direct and rapid communication with the many established capitals.

The question of locality, however, being of international importance, could hardly be decided except by a large consensus of opinion, and by the decision of delegates appointed by the nations.

In order fully to demonstrate the benefits occurring from such a centre, each nation might appoint a commission for the study of the advantages that would accrue to each as a whole, and to the many branches of industry, commerce, science, art, culture, situate within its limits, as well as to investigate the measures needed to legalise its establishment. These commissions could meet at a world convention in Rome, Paris, Berlin, London or Washington, where, if it were desired, the original plans and drawings reproduced in this volume, could be exhibited and their practical as well as artistic merits analysed.

In consideration of the immense and innumerable advantages to be derived by all governments and peoples from a simplification of international methods and relations, the resulting vast economy of time and money, and rapid diffusion of results in all branches of human effort, which would be made possible by the establishment of this centre, the net cost of its realisation and support would be slight.

Though its construction would require a comparatively large sum, this amount divided among the nations, and spread over the number of years necessary for its realisation, would at no time be oppressive. Moreover, it is presumable that the established international associations and institutions, either scientific, industrial, religious, humanitarian, educational or artistic, would aid in the establishment of a monumental centre, destined both to their own aggrandisement and to the worthy representation and protection of the common interests of humanity. Private individuals also who should desire to promote peace and further the progress of the world, would certainly offer assistance.

Moreover, the opportunities opened to nations and to individuals, not only for economy but for immeasurably increased gains, both financial and intellectual, would quickly justify the initial expense.

From the beginning of time centralisation began, and it is legitimate to believe that to the end of time it will continue. Despite prejudice and war, suffering and bloodshed, an irresistible force ever draws men to a deeper understanding of a common aim. An invisible guiding hand unites all peoples by fraternal bonds of a grander sympathy. The memory of the lives that in the past courageously and faithfully gave their energy to the divine mission of unification, stimulates the desire of men to move in unison.

CONCLUSION

AFTER a careful examination of the suggestions and plans brought forward in this volume, the question will arise naturally : where and how could such a centre be advantageously and securely established ?

There can be no doubt that an attempt towards more fraternal international relations is not only morally and spiritually but also economically essential to the progress of humanity ; nor is it doubtful that such relations will result from freer opportunities for close affiliation upon more open grounds ; such affiliations, in fact would uplift the whole human race.

In referring to the general Plans, it will quickly have been seen that this centre was conceived as placed upon the sea-coast ; for a site with direct lines of communication to all the existing capital cities of the world would surely be considered of first importance in the establishment of a centre created for the convenience of all nations. Moderate climatic conditions would likewise render it more inviting and agreeable for those who, coming from any land, might desire to visit or reside there.

The possibilities for such a site abound upon the coast of the Atlantic between the Isthmus of Panama and New England. They are also to be found upon the shores of the Mediterranean : Italy, Spain, Tunis or Tripoli.

The commercial, economic and moral advantages of opening the way to more positive and beneficial relations with Asia and the whole of Africa would undoubtedly be thereby assured. The already international interests of these immense lands offer a magnificent scope for the formation of a grand International Centre, upon or adjoining those rich and vast territories, which, sooner or later, must come into closer economic touch with Europe and America and bring their millions of fertile and productive acres into the current of the active energy of modern scientific, civilised life.

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Man was made to expand. We know that he has done so and will ever continue to enlarge his horizon. As he was born upon earth, so the world was made to live in him, and as it becomes part of him he consciously becomes part of an immortal whole.

Out of the mists of the ages, emerges the mighty figure, Humanity, — an eternal unity, — saturated with the Divine Spirit, with arms extended in appealing supplication, holding in one hand the past, in the other the silent future.



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